Policy Reform and Agricultural Adjustment in Transition Countries

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Introduction

- Major reforms
- Many
  - Price & trade liberalization, subsidy cuts
  - Reforms of property rights, organization of production, agri-food chain, institutions of exchange, ...
- Quasi-simultaneous
- Dramatic adjustments

Pressure for Reforms

- Major inefficiencies in agri-food system
- Reform attempts, but too timid
- It took the removal of Communist Parties for radical economic reforms
- (Question : Why was radical reforms not possible earlier – as in China ?)

Reforms varied in scope, sequencing and progress

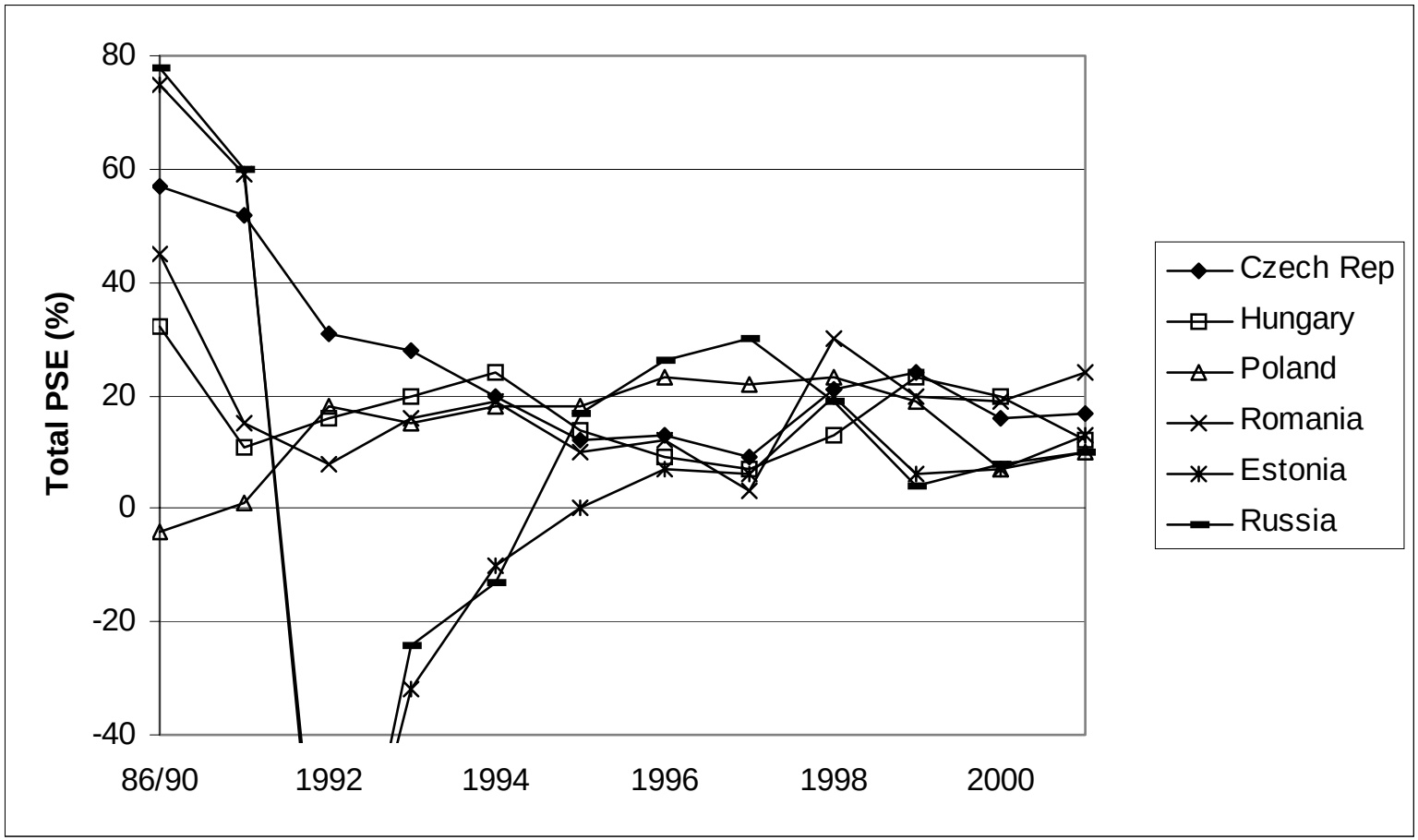
Progress by WB indicators (2001) :

- Central Europe 8.7
- Baltics 8.7
- Balkan 7.7
- European CIS 4.9
- Central Asia 4.4

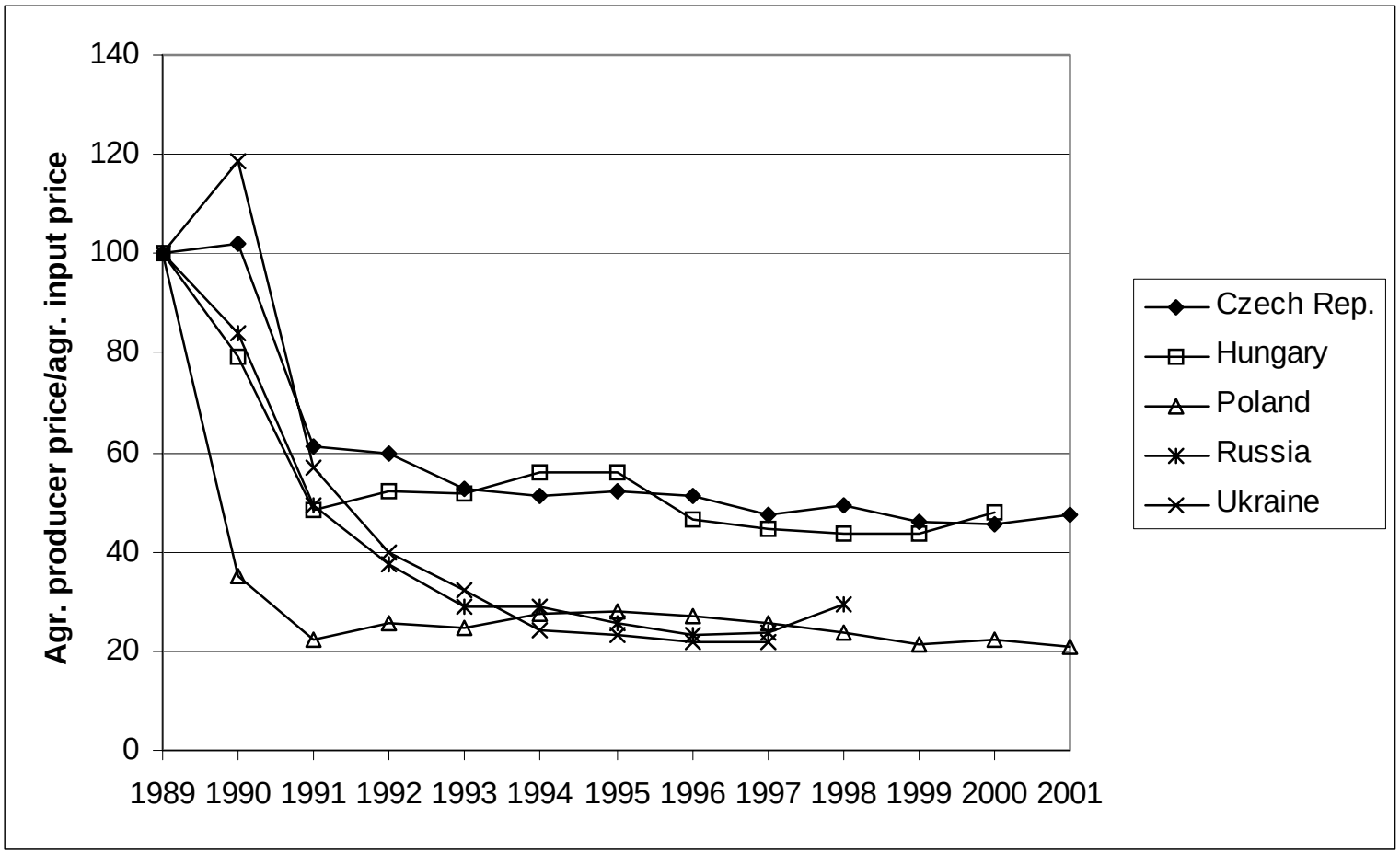
Reforms

- Macro-economic reforms
- Price, subsidy, and trade policy reform
- Land reform
- Farm restructuring
- Privatization of agribusiness and the food industry (incl. Credit system)
- Institutions for contract enforcement and exchange

Subsidies and farm support: PSEs 1986 – 2001



Effects: Agricultural terms of trade since 1989 - 2001



Land Reforms

- Restitution in CEE
- Share distribution in Russia, Ukraine, etc

Key :

- Nature of property rights (strong and well defined) more important than who owns them
- Importance of rental market for exchange

Restructuring of farm organizations

- (= both reform and adjustment)
- More complex picture than expected ex ante
- E.g. Large variation (in size and role of family farms) between countries, reflecting differences in policies and structural conditions

FARM RESTRUCTURING
Farm Individualization Index (FII)

Country	FII	Year
Latvia	94.7	1997
Albania	94.2	1995
Lithuania	60.4	1996
Romania	60.2	1998
Hungary	51.1	1996
Slovenia	50.0	1997
Bulgaria	44.8	1995/6
Czech Republic	24.0	1998
Ukraine	14.1	1995
Russia	12.1	1995
Slovakia	3.2	1998

Privatization and reform of Agribusiness & food industry

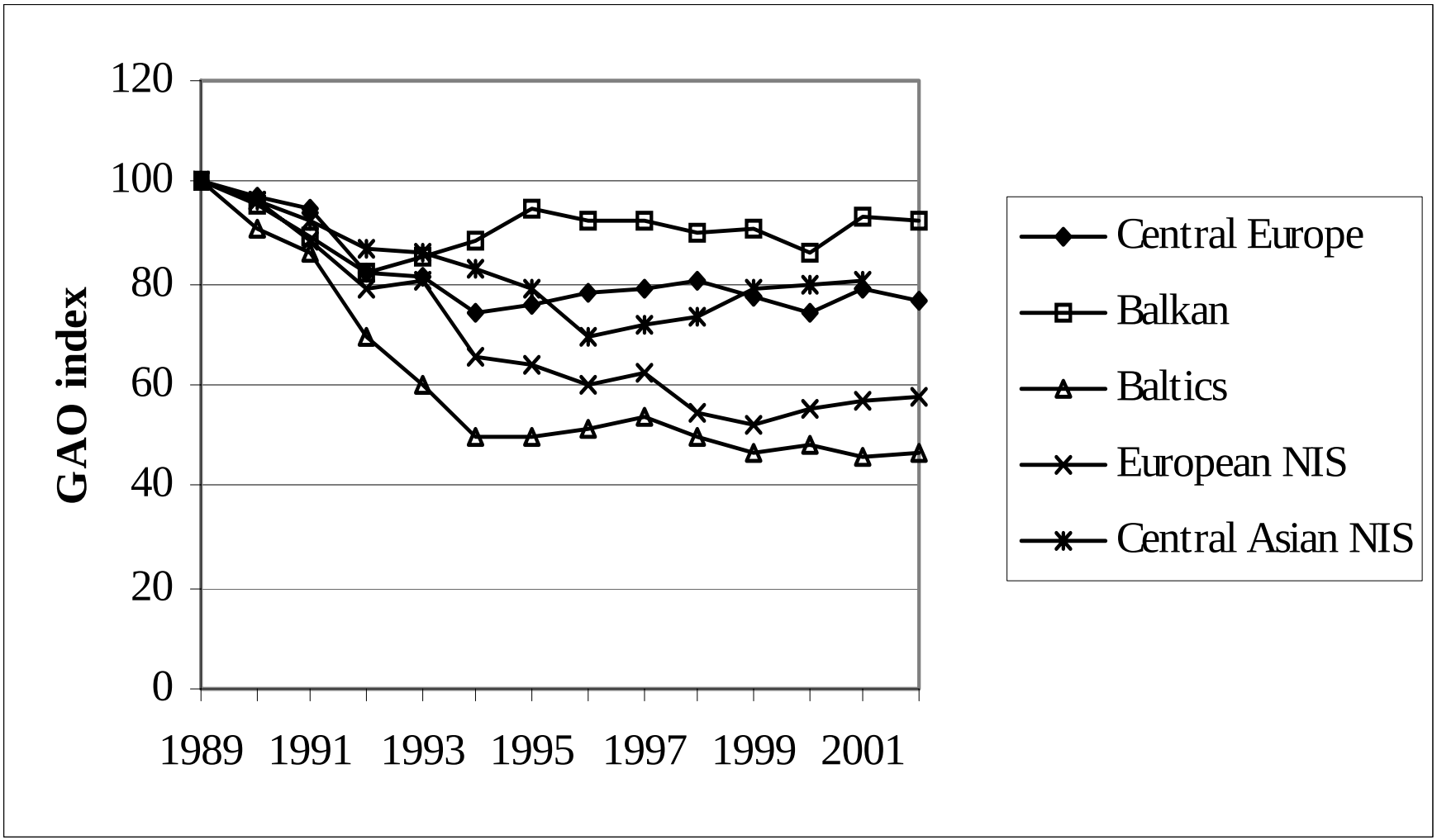
- Different policies (sales, vouchers, ...)
- Restructuring has been crucial for recovery and growth in agriculture
- Important role of foreign investment

Effects & Adjustments: I. Output

- Effects dramatic, and not all as expected
  - Decline in output
  - Change in commodity mix
  - Change in quality (major deficiency)

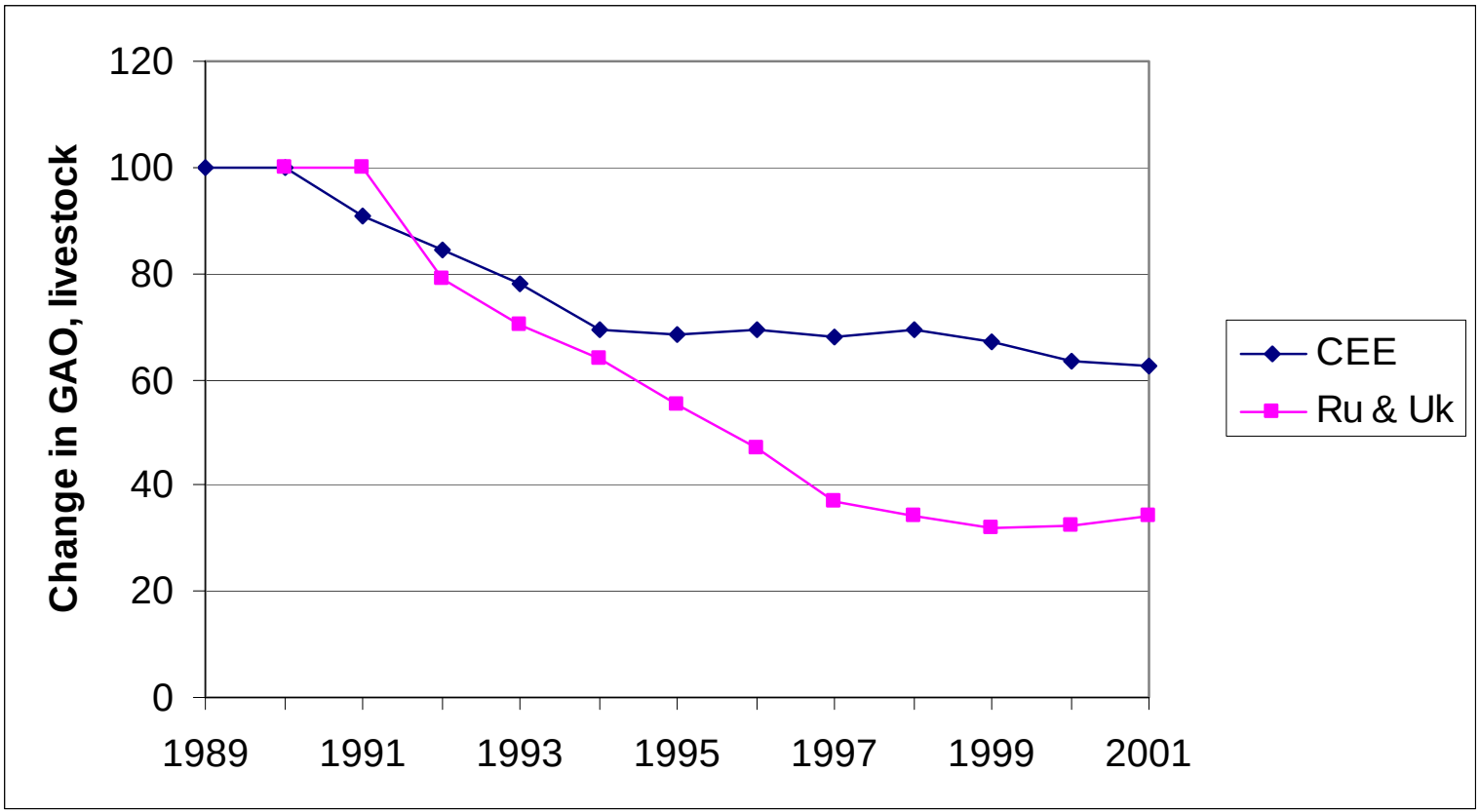
- Initial output fall is caused by combination
  - institutional disruptions (in property rights, organization, exchange)
  - subsidy cuts / price liberalization
- Recovery starts as of 1993 in some countries

Change in Agricultural Output



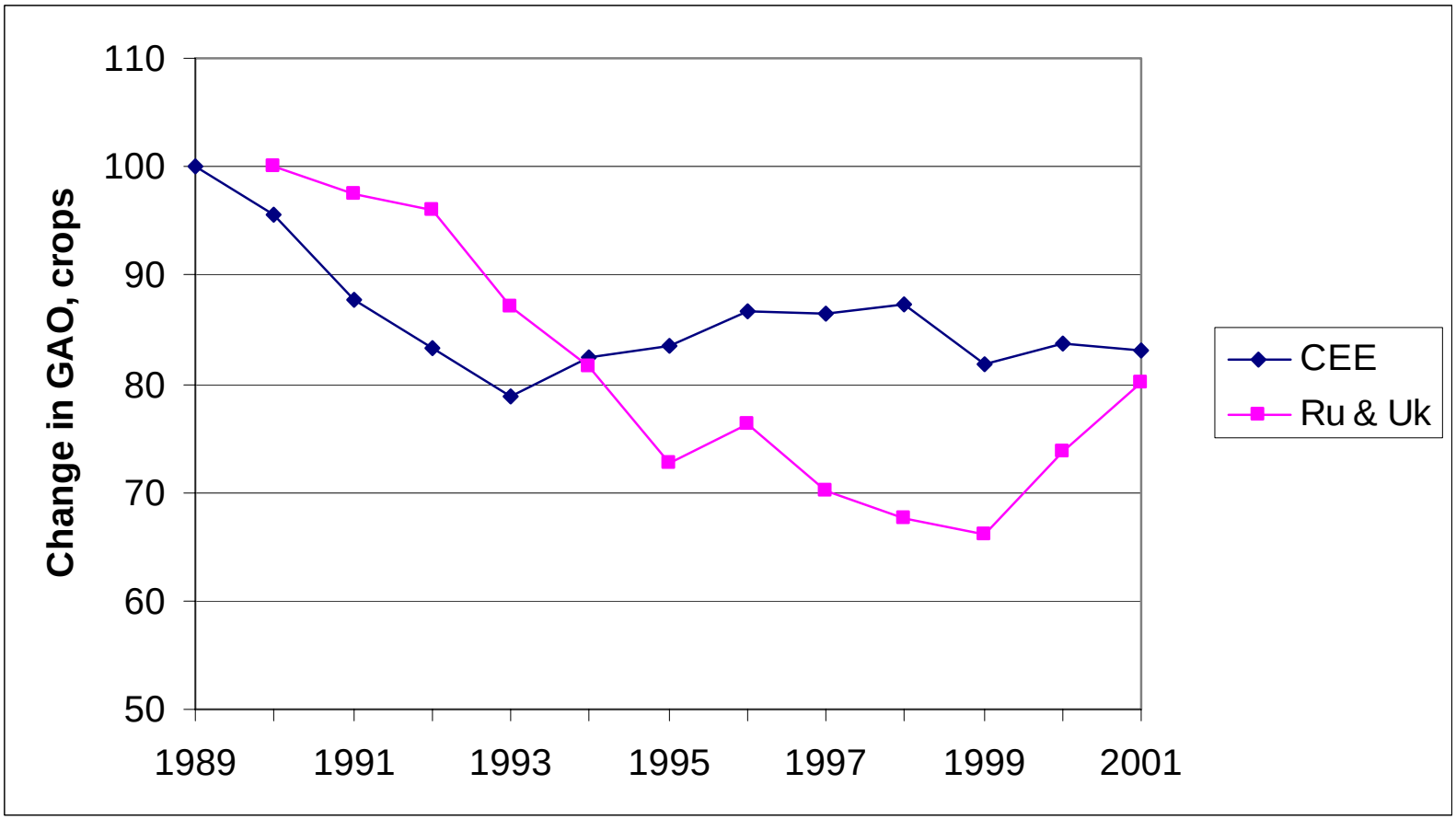
LIVESTOCK Output 1989-2001

CEECs vs Russia & Ukraine



CROP Output 1989-2001

CEECs vs Russia & Ukraine



II. Change in Input Use

Relatively similar across countries:

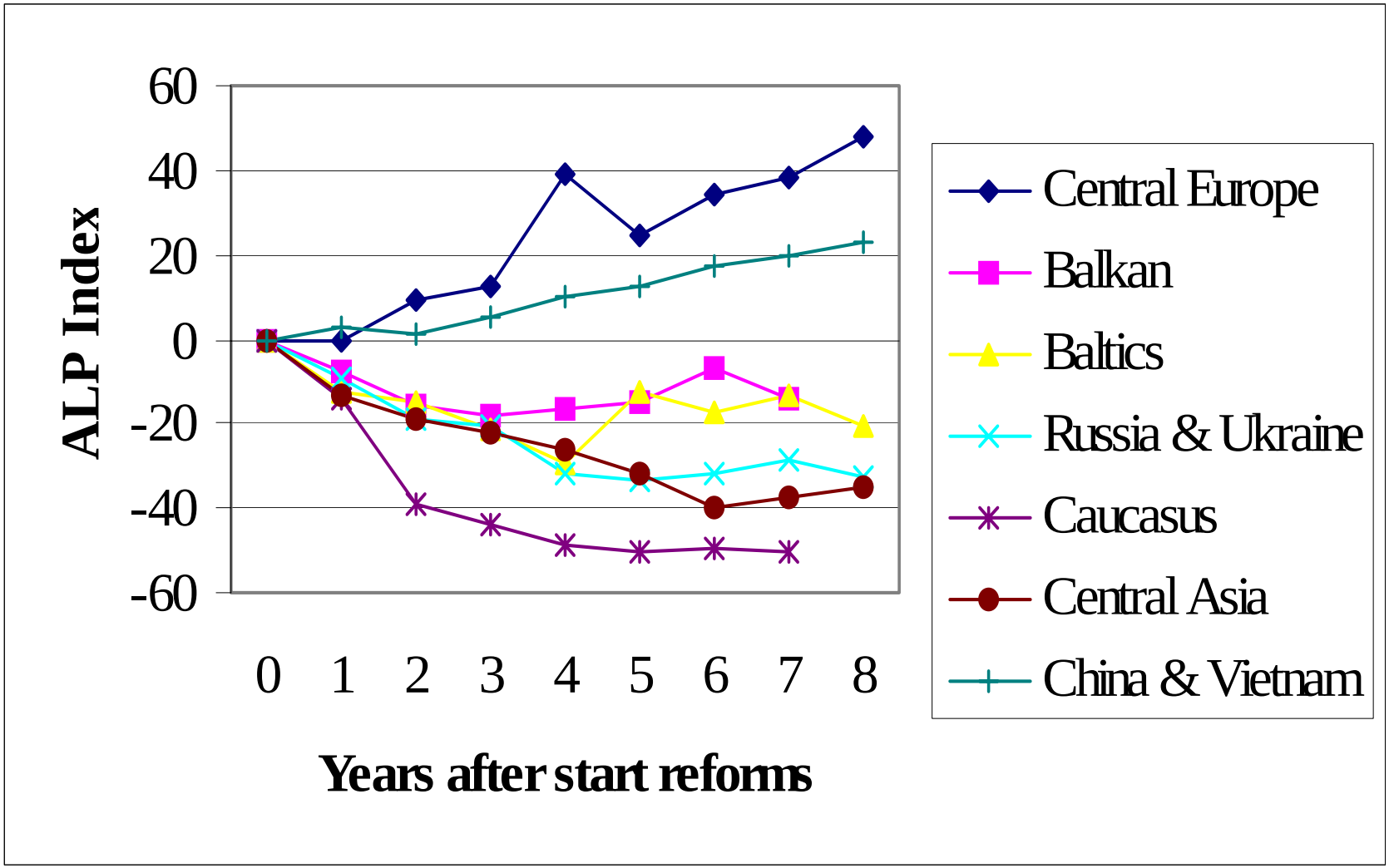
- Land use : small decline (- 5-10%)
- Machinery use : medium decline (- 20-30%)
- Fertilizer use : huge decline (- 80%)

- Labour use : wide differences

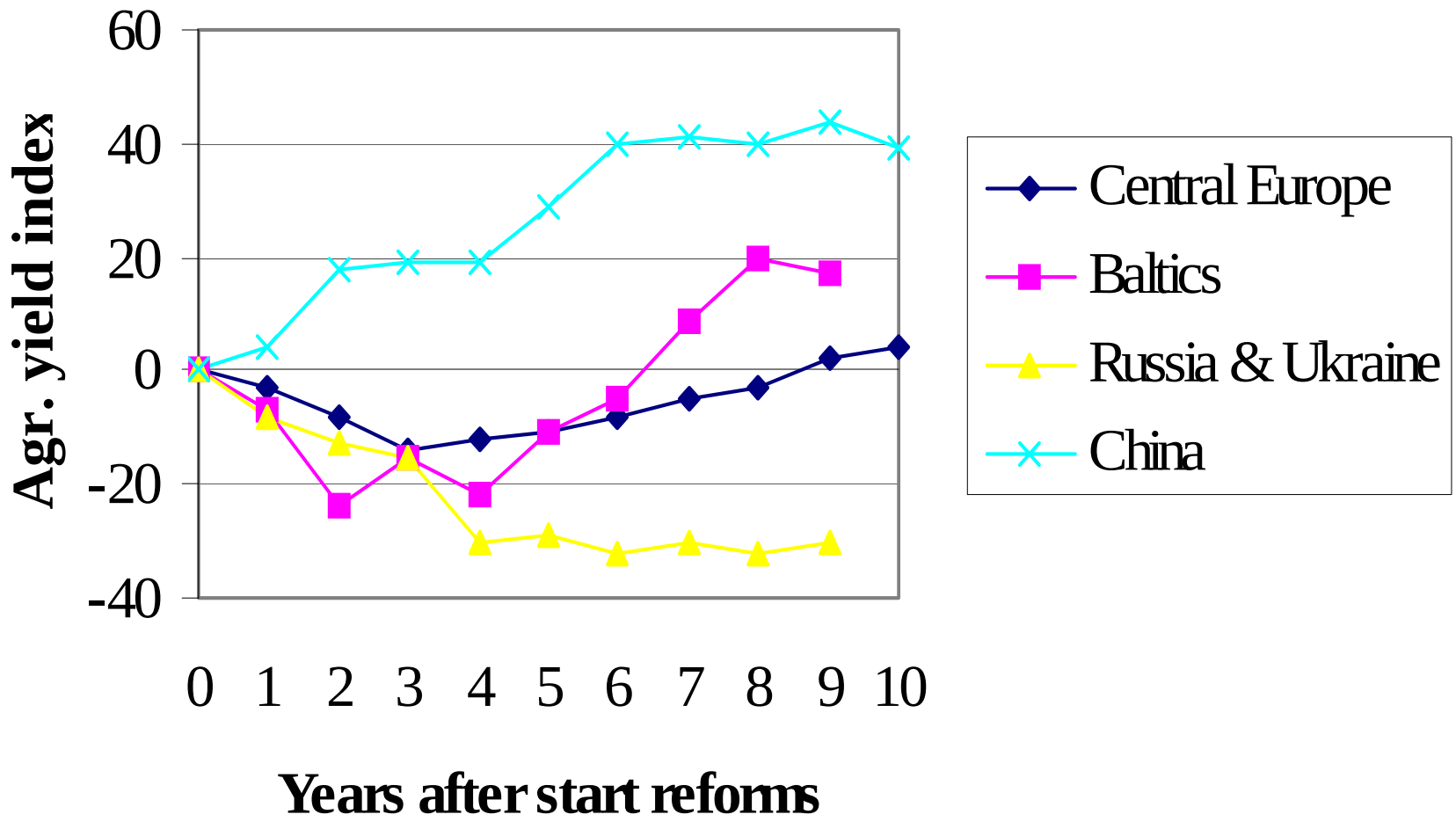
Effects & Adjustments: III. Productivity

- Effects dramatic, but different than output
- TFP, yields : Initial fall, but fast recovery in some countries
- Labor productivity : Major differences among countries

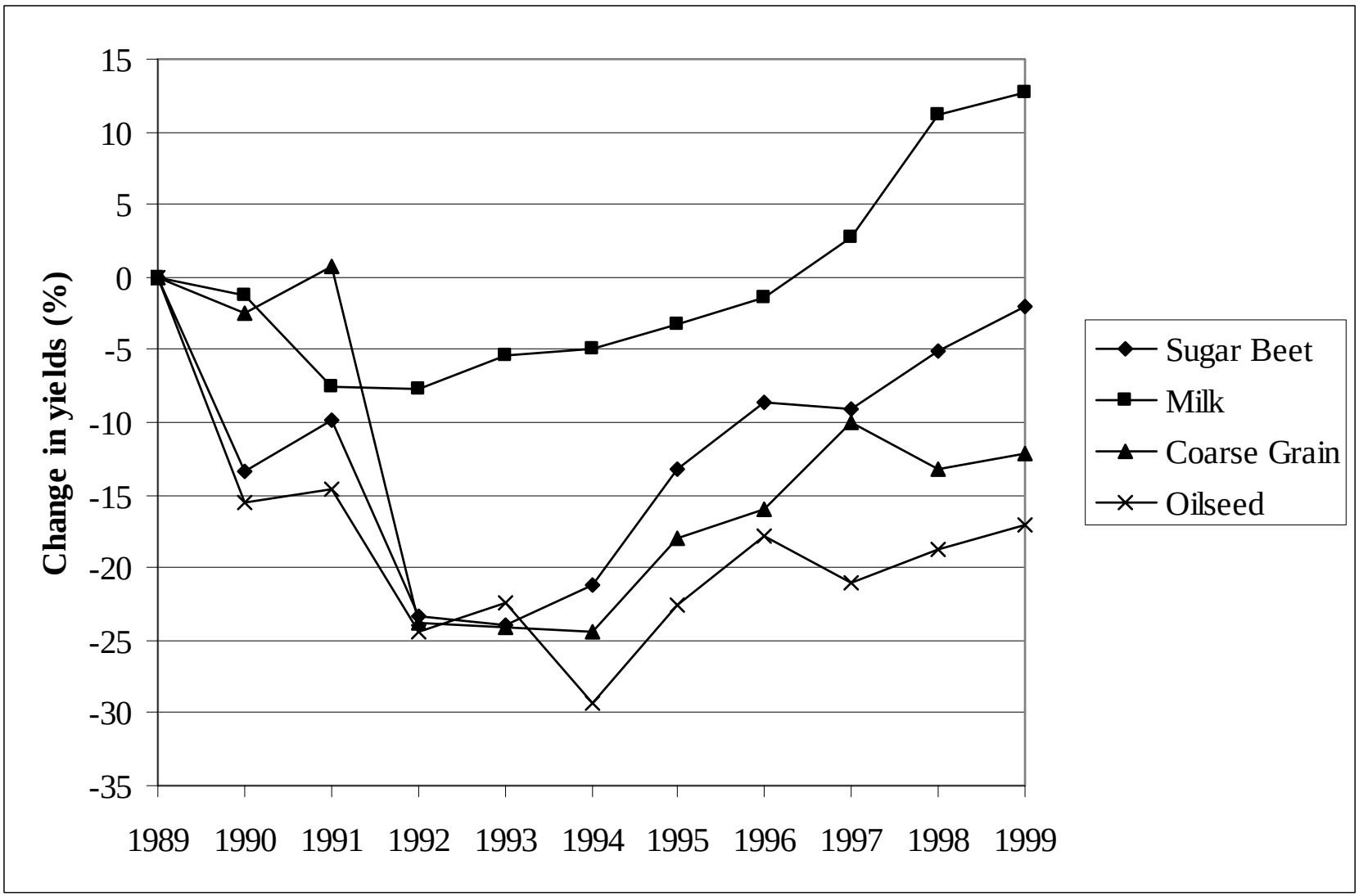
Change agric labour productivity



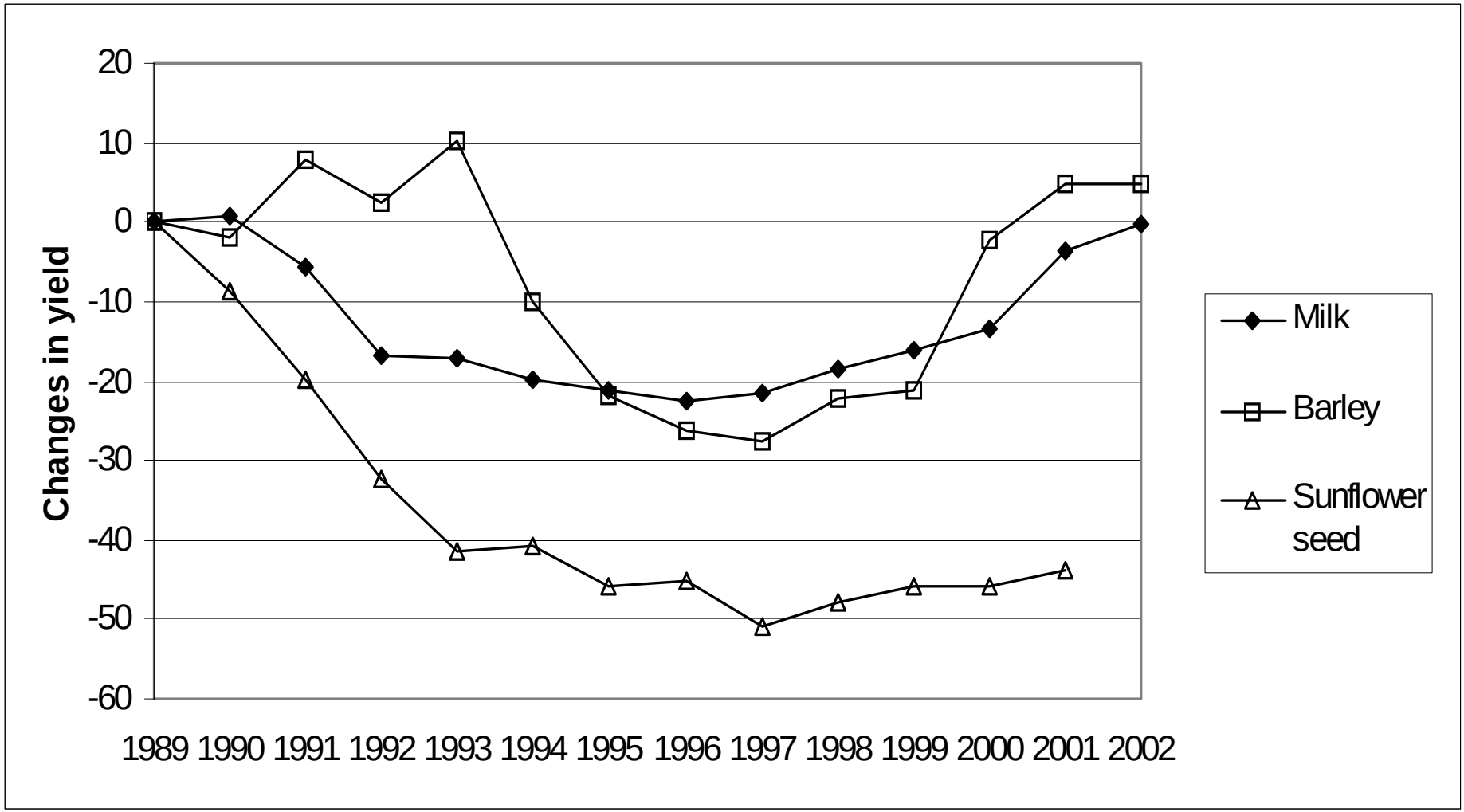
Change in agricultural yields



Changes in yields in Central Europe

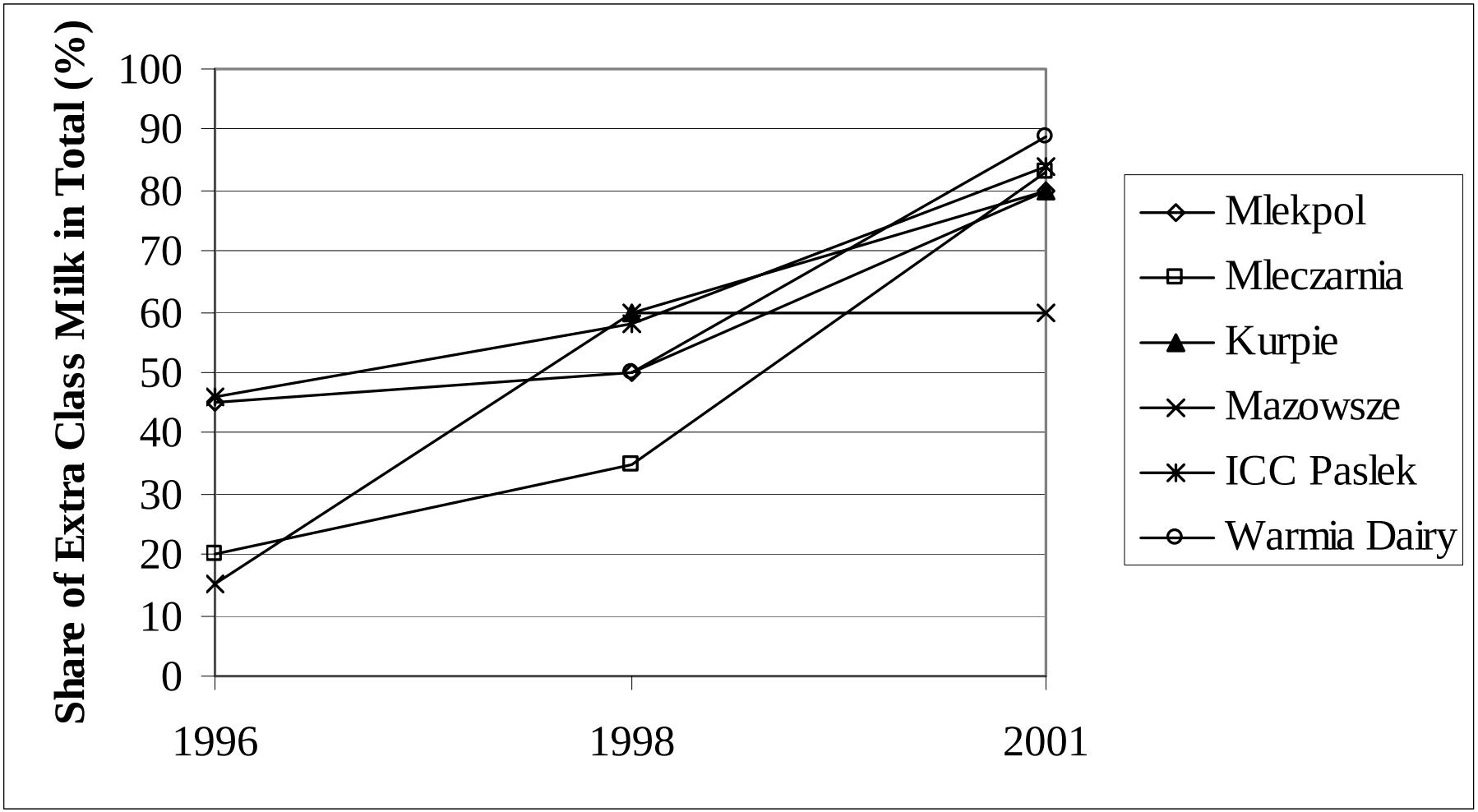


Changes in yields in CIS-3 Russia, Ukraine, Kazakstan (avg)



Effects: Change in Quality

(Top Quality Milk in NE Polish Dairy 1996 – 2001)



Reforms & adjustments

- Where land rights were clearly defined and farm budgets hardened, productivity increased. Elsewhere efficiency declined.
- An essential ingredient in the recovery is the development of institutions for contract enforcement and exchange of inputs (capital) and outputs
- Most successful were non-traditional, flexible approaches based on private contract enforcement arrangements (eg leasing, contracting, vertical integration, ...)

Reforms & adjustments– 2

- Macro-economic stabilization is essential pre-condition ...

- General reforms are very important because they affect access to capital, technology, off-farm employment, ...

Reforms & adjustments – 3 (International framework)

- Trade liberalization reinforced other effects
- EU enlargement : important as disciplining framework
- Migration was very important in some countries and has major welfare effects (HH strategies)
- Capital flows : effect depends on other reforms
- Foreign direct investment : very important impact

Agri-food companies & FDI were engine of productivity growth in the agri-food chains

- Companies face important problems accessing (quality) supplies and payments
- Have initiated innovative contracting and farm assistance programs in response
- Important vertical and horizontal spillovers have resulted

Farm assistance by agribusiness companies – examples :

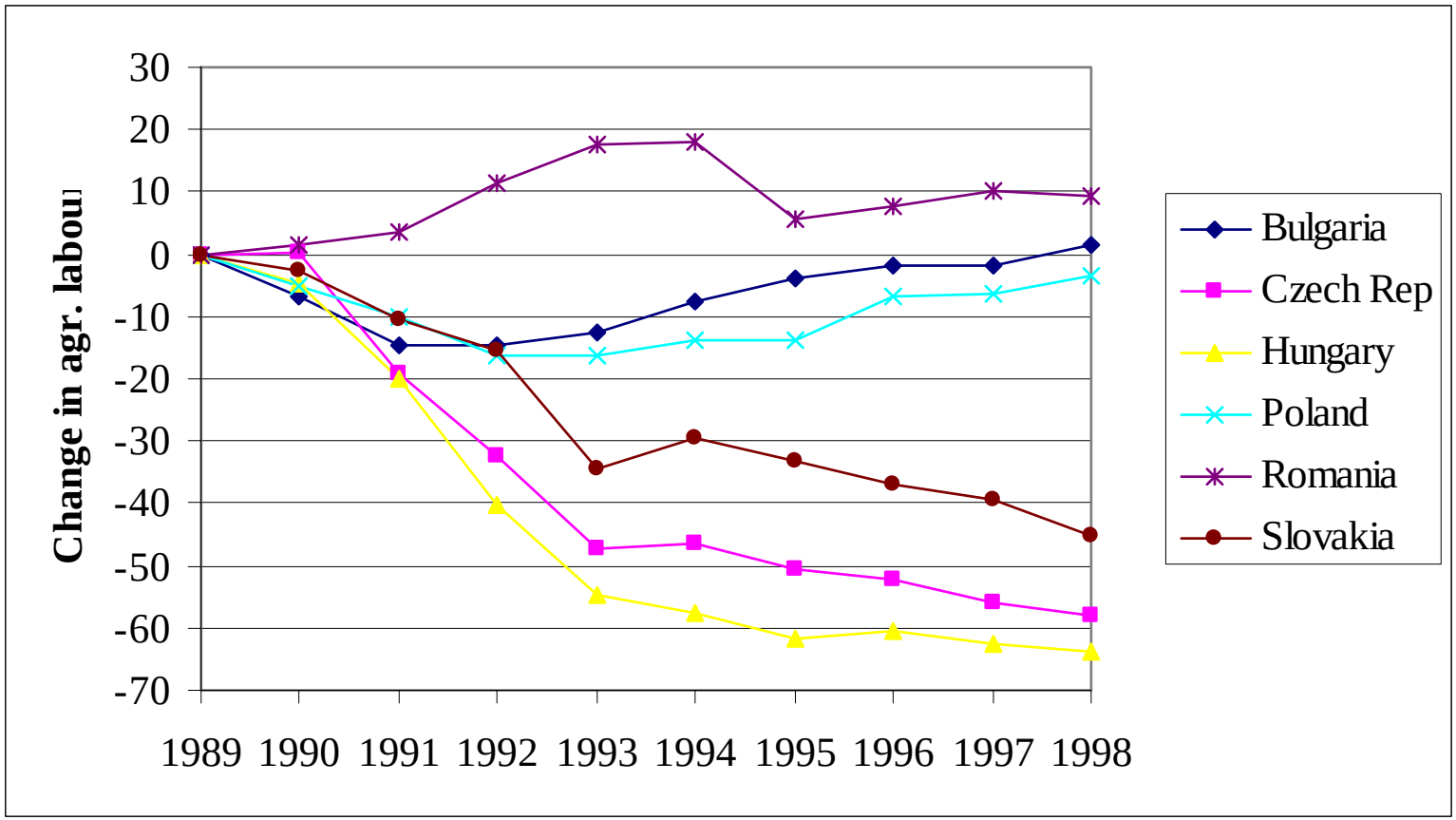
- Input supply programs
- Investment assistance program
- Trade credit
- Bank loan guarantee programs
- Extension services
- .....

Essentially, these are private initiatives to address market imperfections in the absence of public institutions

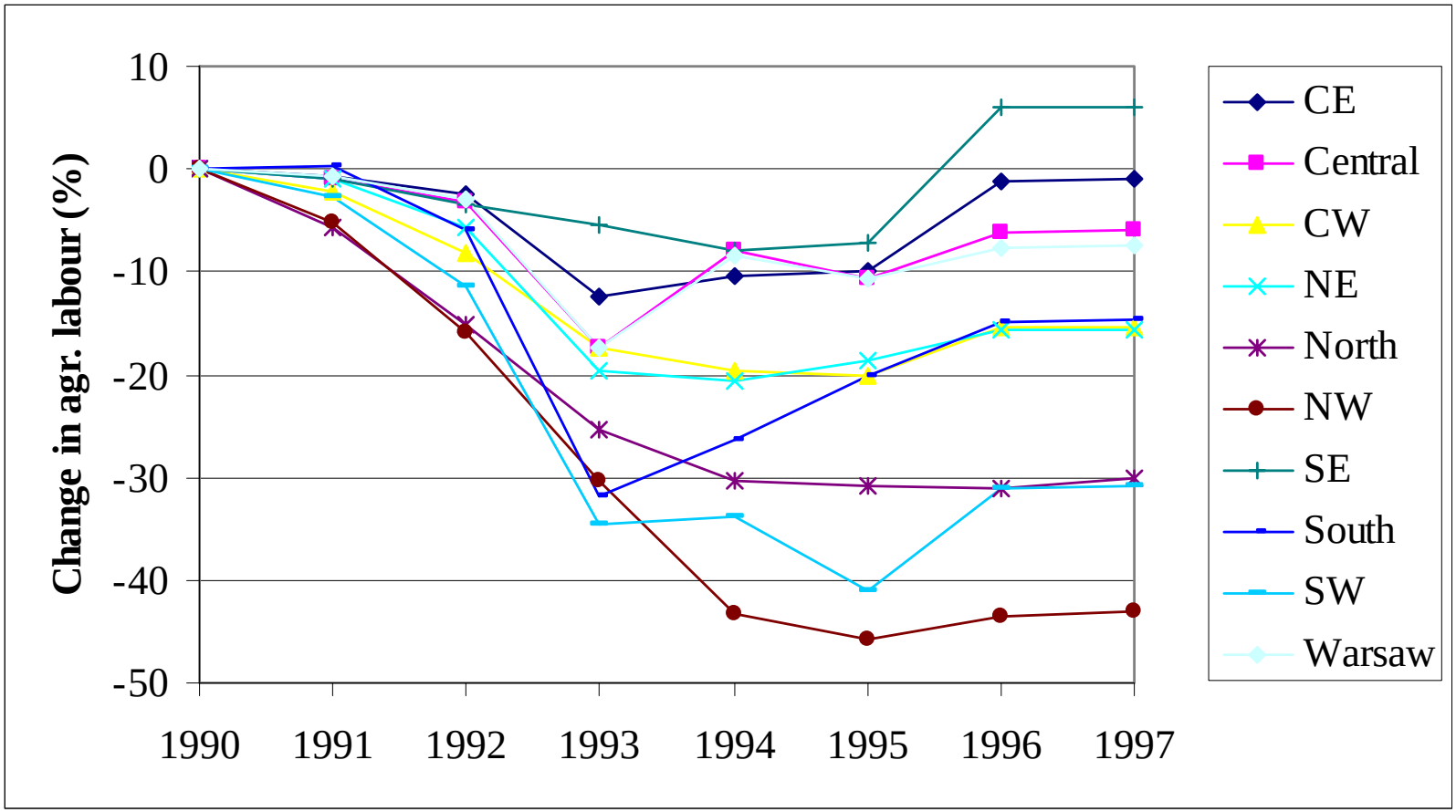
Labour adjustments and causes

- Huge difference in adjustment patterns
- Key factor behind differences in labor productivity changes
- Obviously, labour is of special interest

Change in agricultural employment, CEECS 1989-1998



Agricultural employment in Poland by region (1990-1997)



Different labor adjustments paths are caused by :

- 1/ Initial conditions
  - initial farm structure
  - level of development & social security
  - Technology (labor intensity)
  - ...
- 2/ Reform policies
  - government regulations w.r.t. privatization, restructuring, land reform, ...
  - factor market reforms (labor, land, capital constraints) in the economy
  - ....

Impact of changes in the rest of the economy

- Unemployment or growth in other sectors affect agric labor through change in reservation wage
- However, effect conditional on
  - liberalisation of the economy (eg. labor market)
  - workers' skills
- Human capital is significant factor for both off-farm employment and farm growth

Education level by sector in Poland

- Share of employees with only elementary and lower education

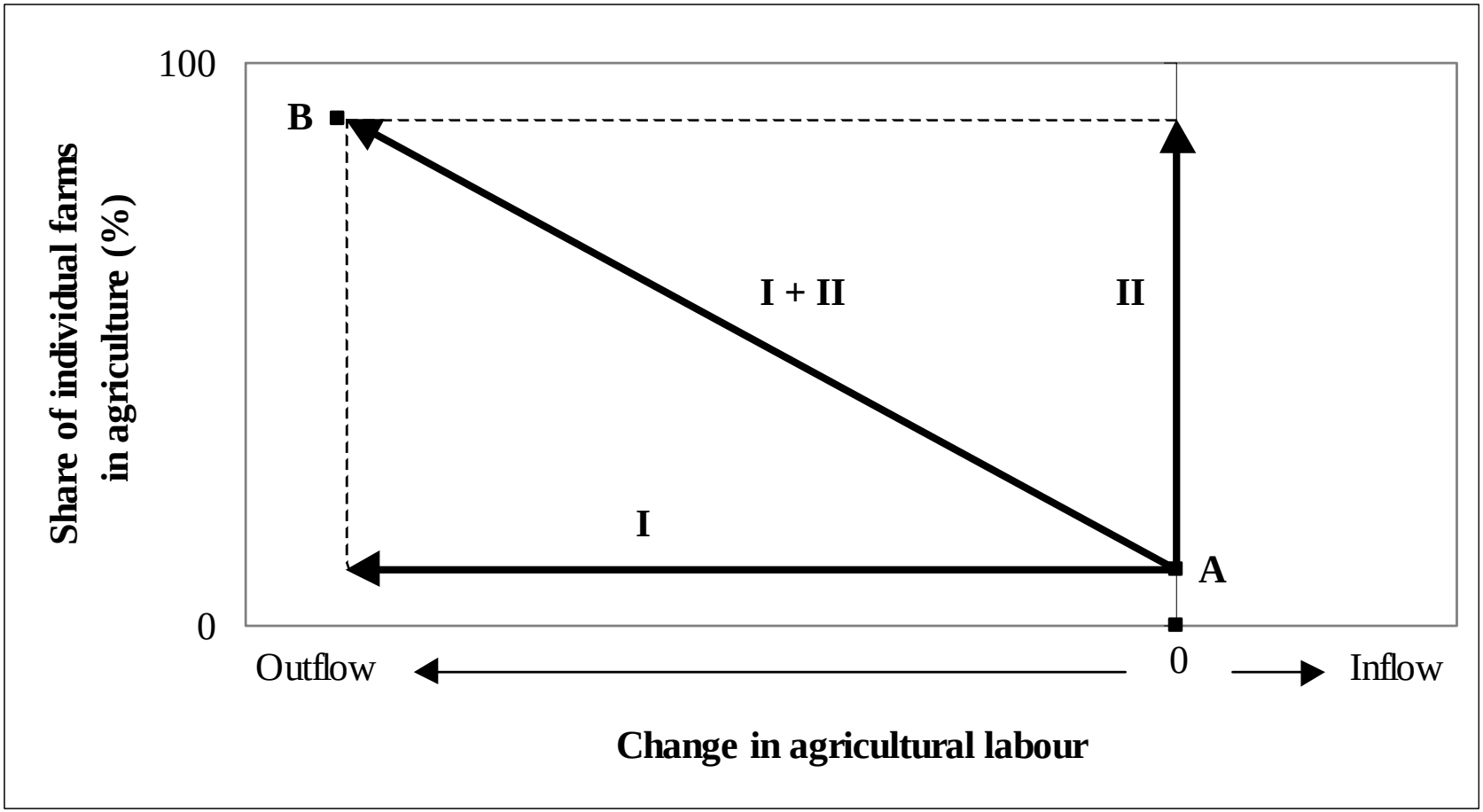
Agriculture	43 %
Construction	16 %
Industry	13 %
Services	8 %

Farm restructuring : engine of growth or social buffer ?

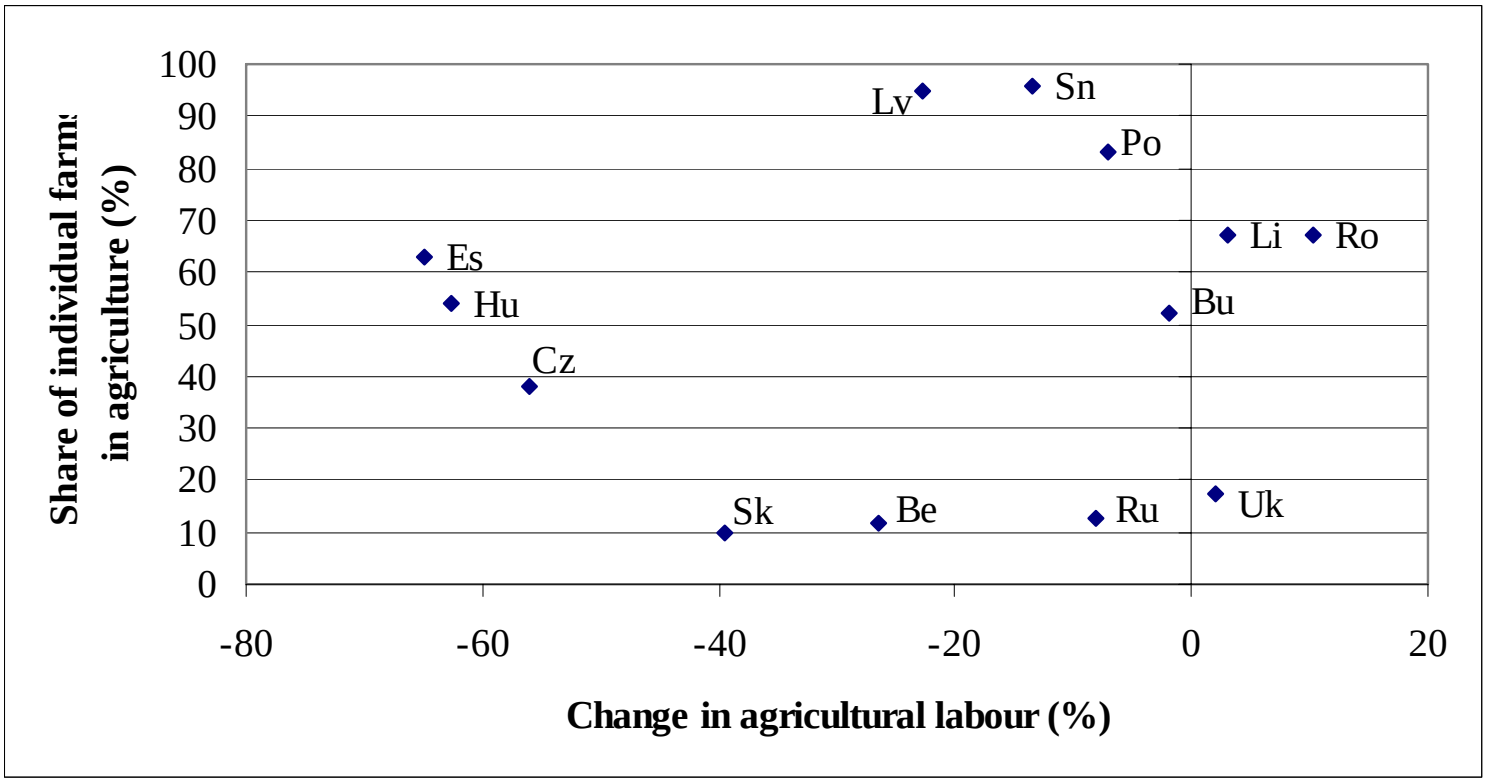
- Both – differences between countries and within countries

- Affects “location” of surplus labor when demand reduction affects agriculture (underemployment on household farms vs open unemployment)

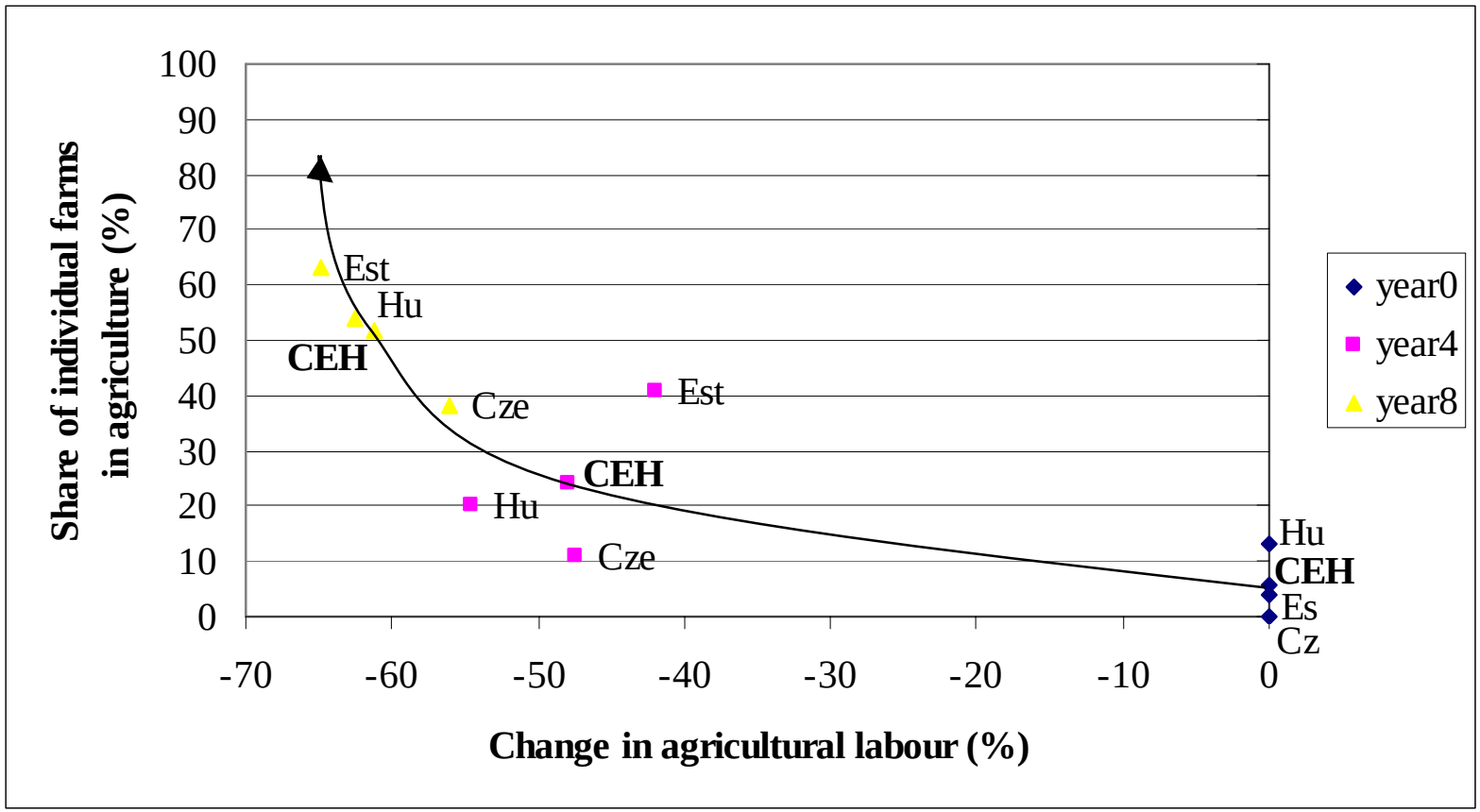
An endogenous farm & labor adjustment process



An endogenous farm & labor adjustment process ?????



The Czech, Estonia, Hungary (CEH) path



Where did agricultural labor go?

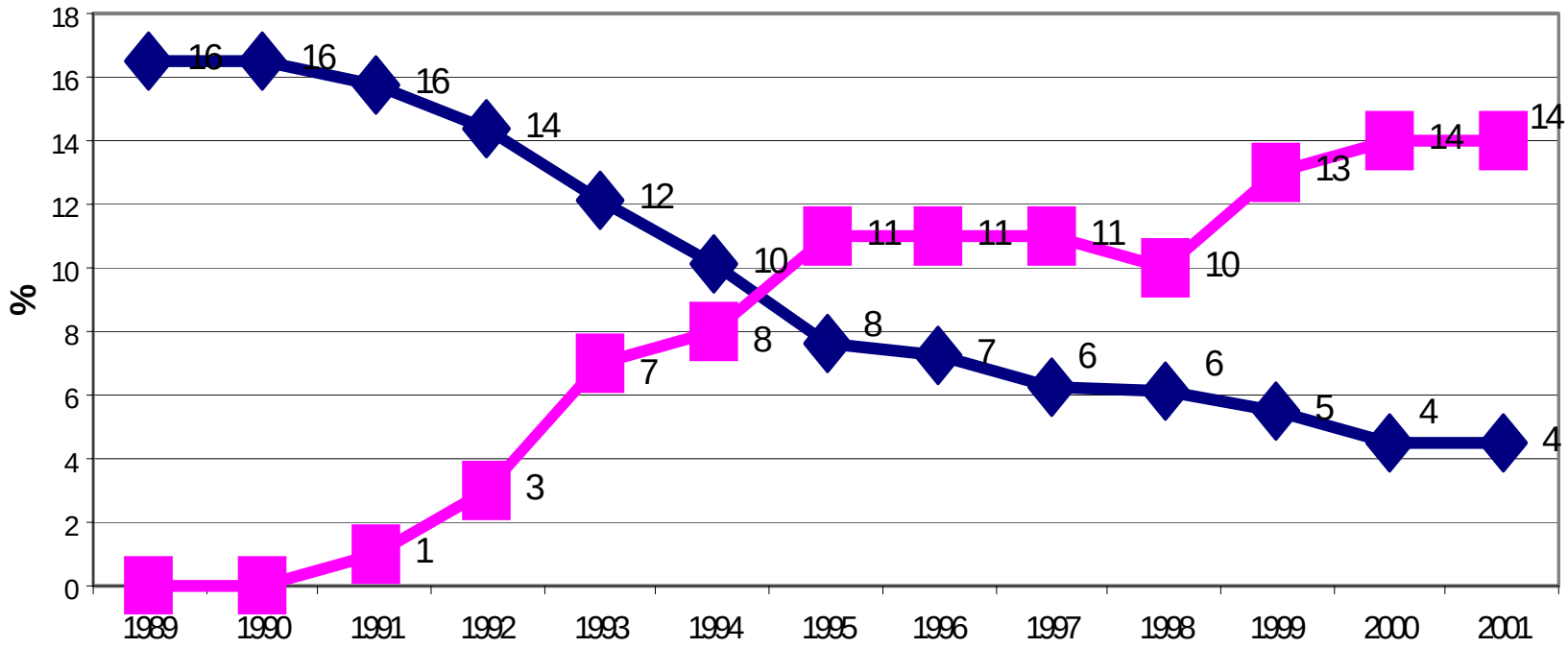
Czech Rep. (1989-97)

- 1989 : 533,000 agric workers
- 1997 : 201,000 agric
  120,000 non-agric (before)
  212,000 left, of which:
  - Retirement (50%)
  - Other sectors (45%: 75% urban and 25% rural)
  - Unemployment (5%) – more after 1996

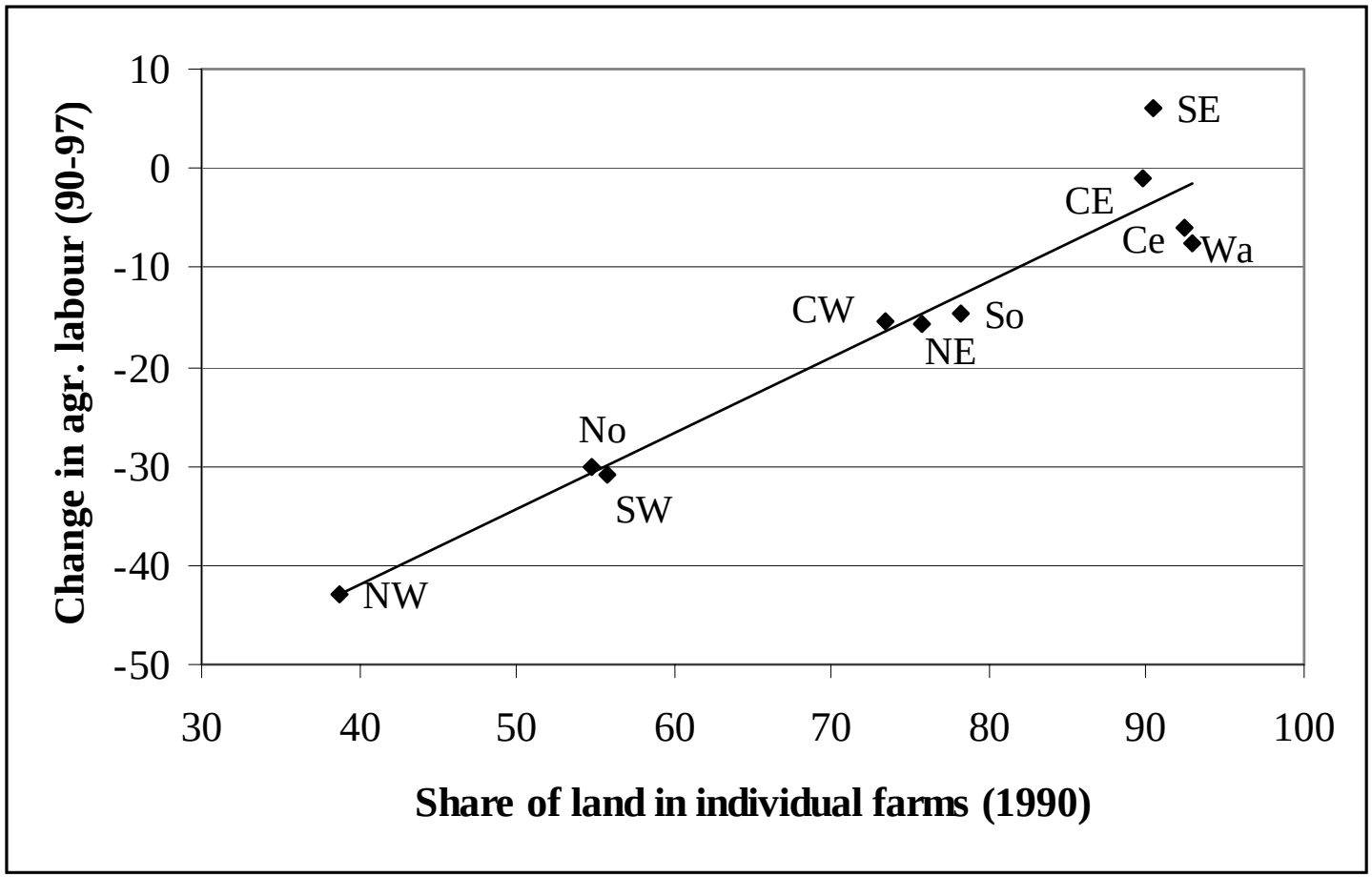
Slovakia : similar, more unemployed

Poland: Regions with much outflow: unemployment

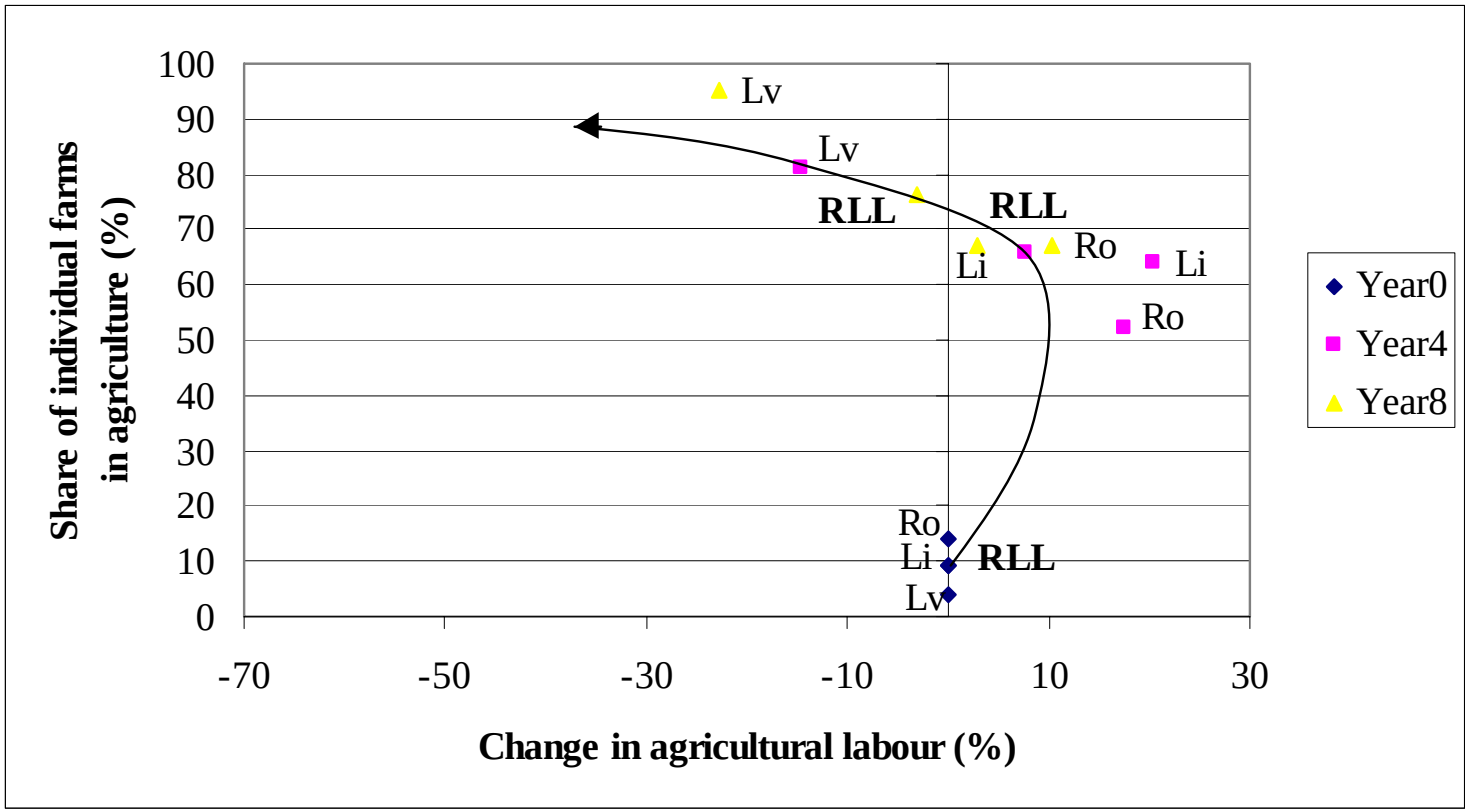
Estonia : Agricultural employment and rural unemployment



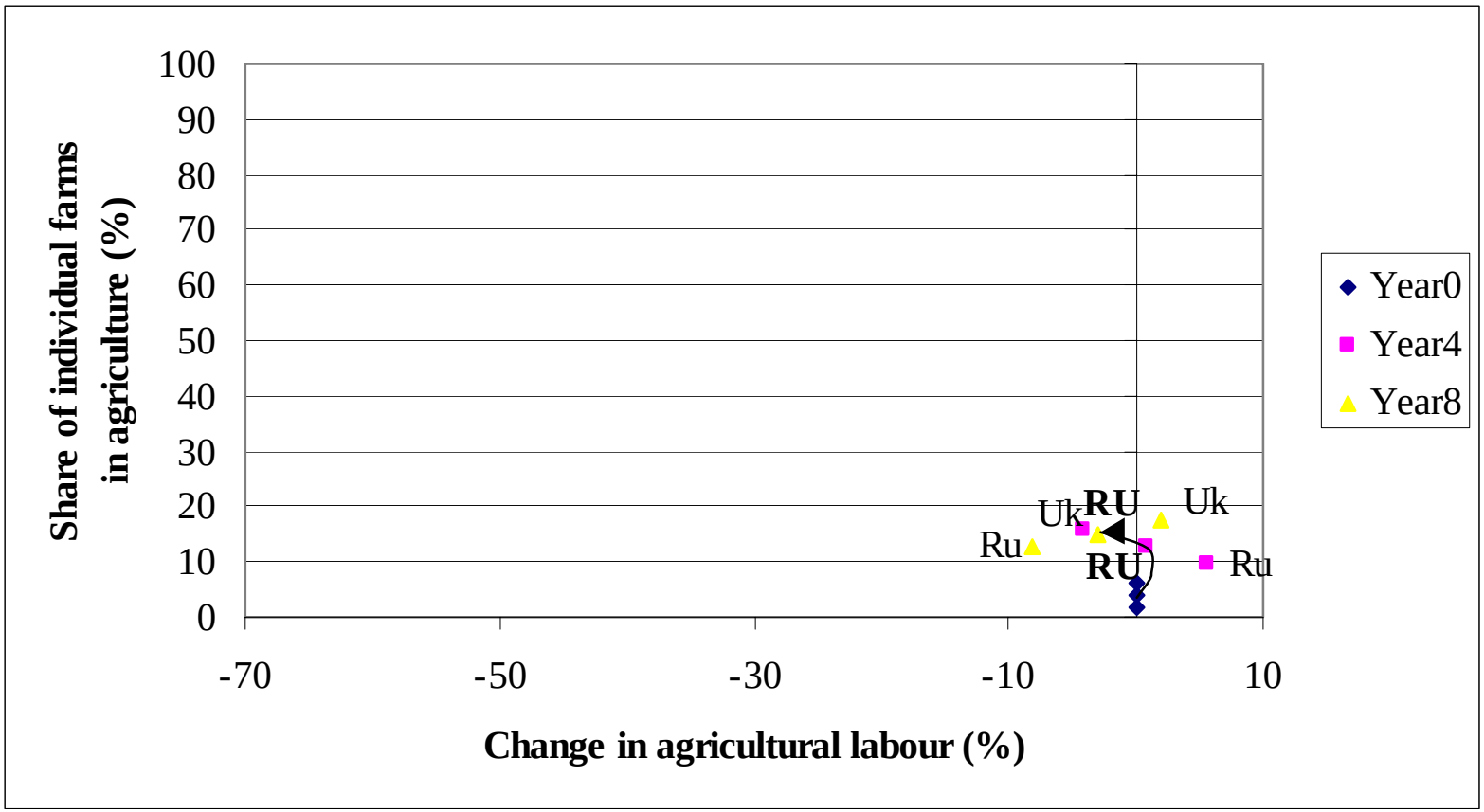
Initial farm structure and labour adjustment in Poland



The Romania, Latvia, Lithuania (RLL) path



The Russia, Ukraine (RU) path



Initial conditions and reforms by group (CEH – RLL – RU)

	CEH	RLL	RU
Initial Conditions			
Land in individual farms (%)	6	9	4
Share of agr. in employment (%)	13	21	17
GNP per capita (PPP $)	8100	6160	6700
Labour intensity (Pers./ha arable land)	0.15	0.20	0.11
Reform			
Exit costs due to govt. regulations[b]	2.3	1.7	3.0
Progress in land reform[c]	8.3	8.3	5.5
Progress in general agr. reform[c]	8.5	7.2	5.4
Liberalisation index[d]			
after 4 years	87	76	46
after 8 years	93	84	74
Terms of Trade effect			
after 4 years	-28	-51	-71
after 8 years	-50	-60	-75
Relative input price effect			
after 4 years	-26	-65	-86
after 8 years	-24	-43	-83[e]

Initial conditions and reforms : Key differences CEH vs RLL

Initial conditions:

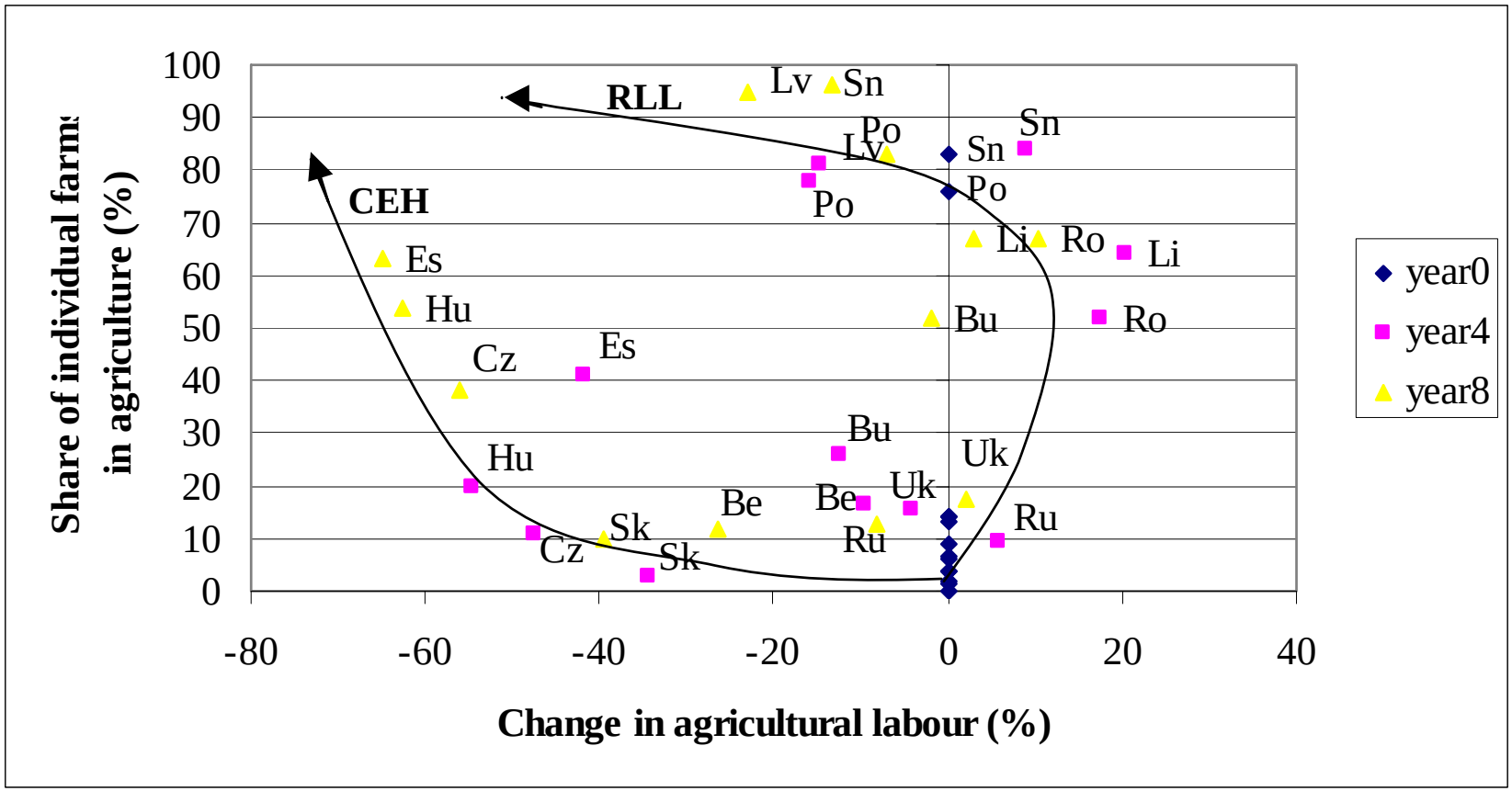
- RLL more labor intensive => INDIV efficiency
- RLL lower GDP/capita => INDIV social reasons

(Romanian "farmers" !)

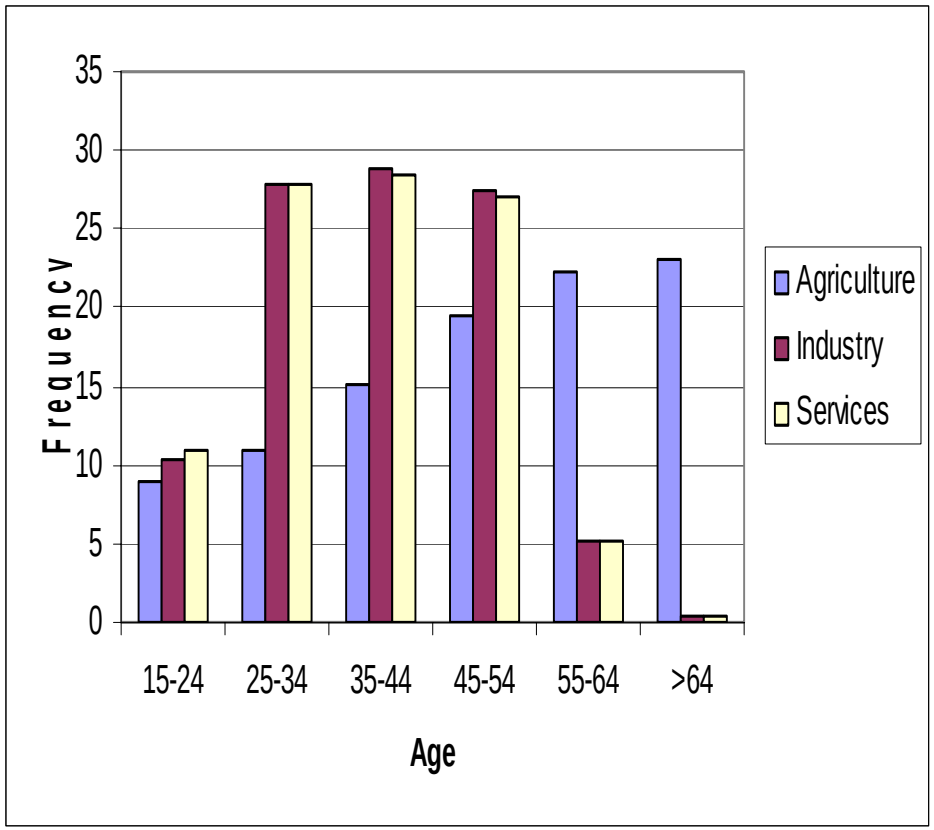
Reforms:

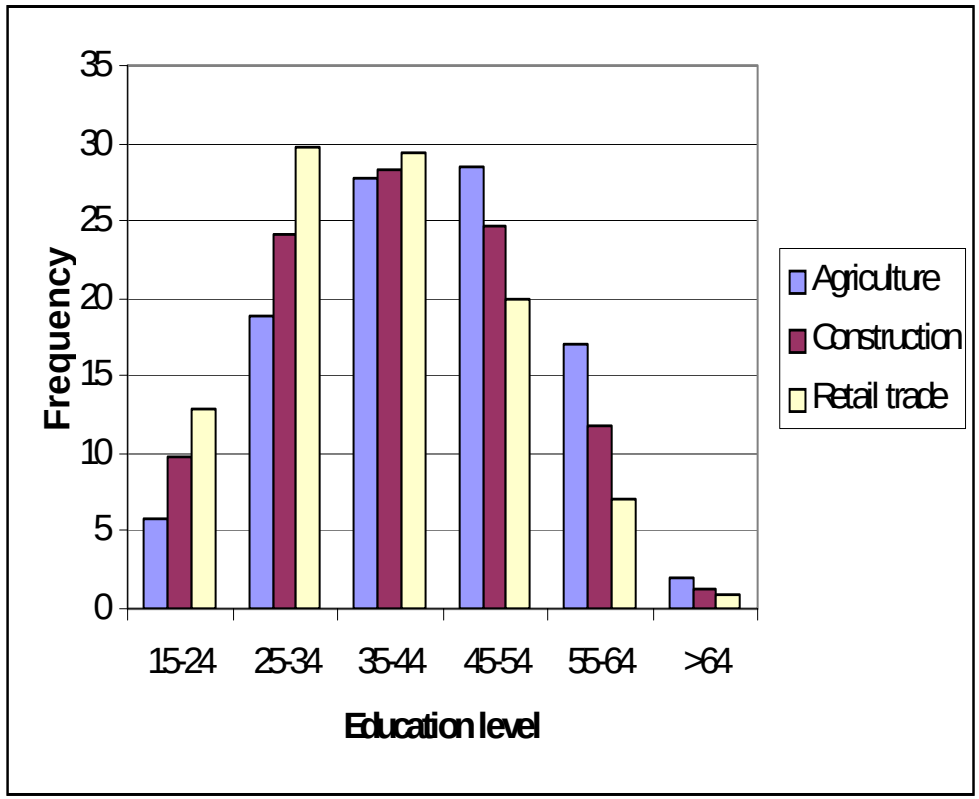
- RLL stronger decline in wages => substitution + INDIV
- RLL gov't policies more towards INDIV
- RLL slower overall liberalization (factor markets)

Patterns of adjustment

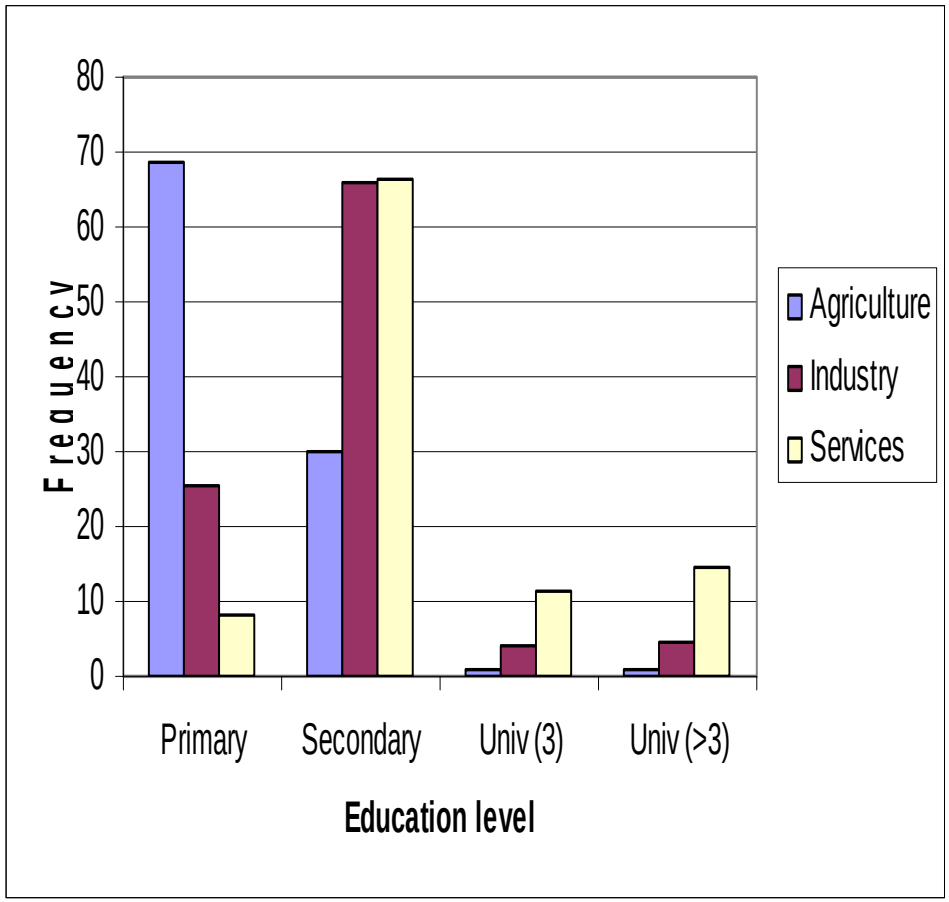


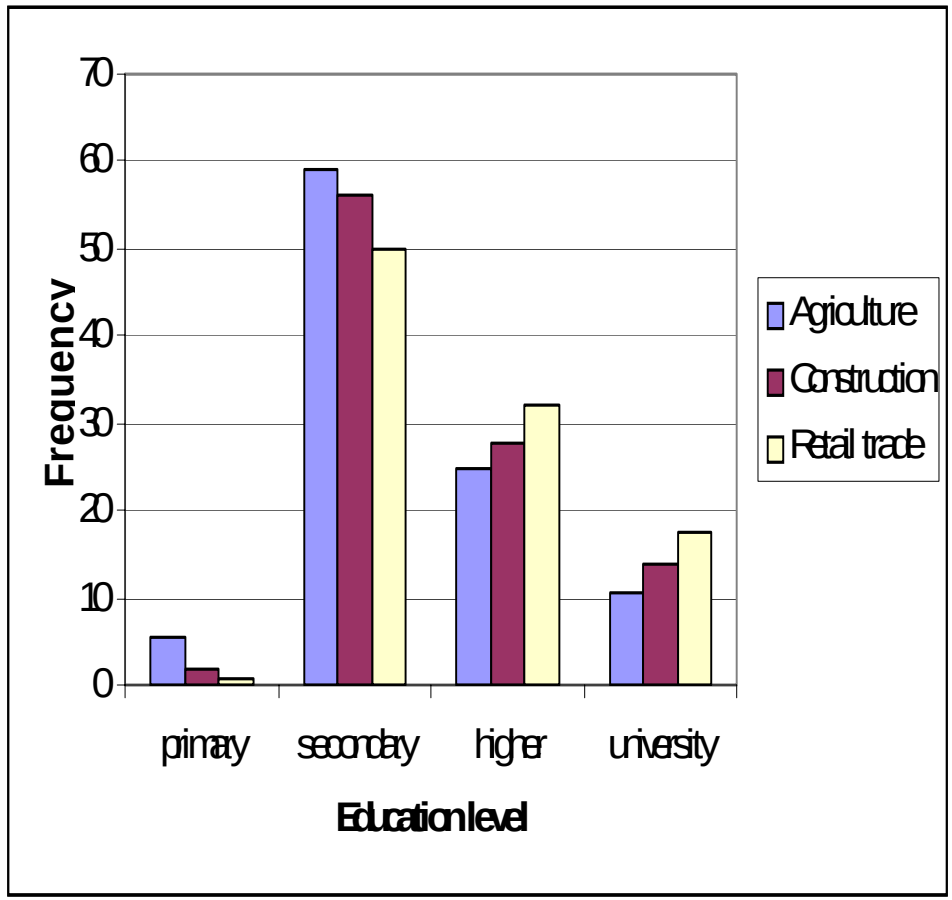
Age distribution by sector
Slovenia, 1999 Estonia, 2000



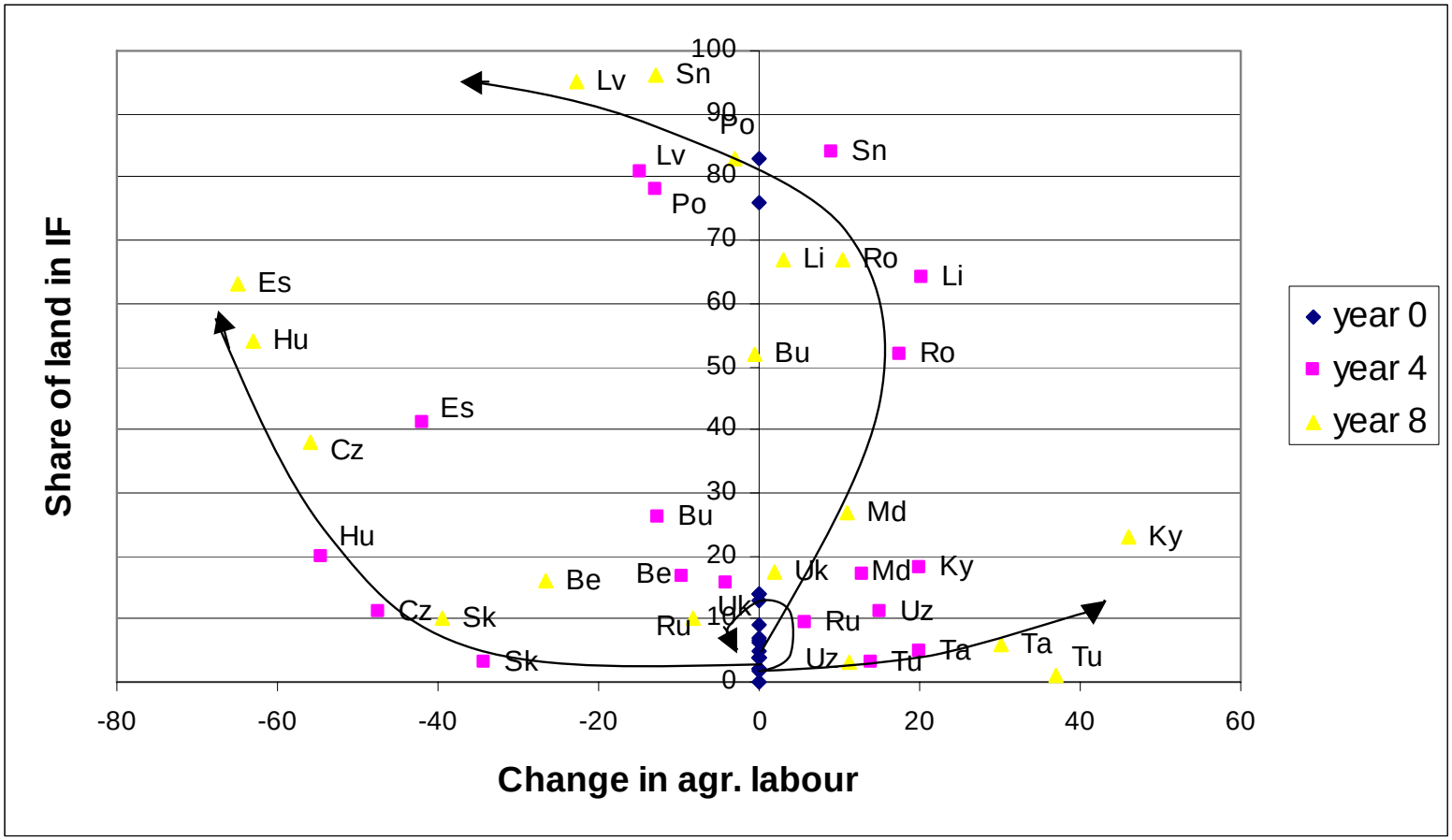


Education distribution by sector
Slovenia, 1999 Estonia, 2000





Patterns of adjustment (+ Central Asia)



Concluding remarks

Transition reforms

- Some common characteristics
- Considerable variation

Adjustments

- Dramatic
- Reflected (some of the) basic principles
- Often via complex / different roads
- Depend strongly on non-agricultural factors / policies

Lessons : Importance of ...

1. Institutions
2. “Non-traditional” and flexible approaches (leasing, rental markets, contracting, private enforcement mechanisms, user rights, ...)
3. Complementarity of reforms
4. External environment
5. Distributional effects & adjustment processes were complex & varied
6. Dynamics of impacts :
   - Economic/welfare: Losses first, gains later
   - Politics/distribution: early winners may block further reforms, and hi-jack the entire process
7. Modesty & care in advise & analysis

Additional figures & tables

Where did agric. labor go?

Czech Rep. (1989-97)

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  - Other sectors (45%: 75% urban and 25% rural)
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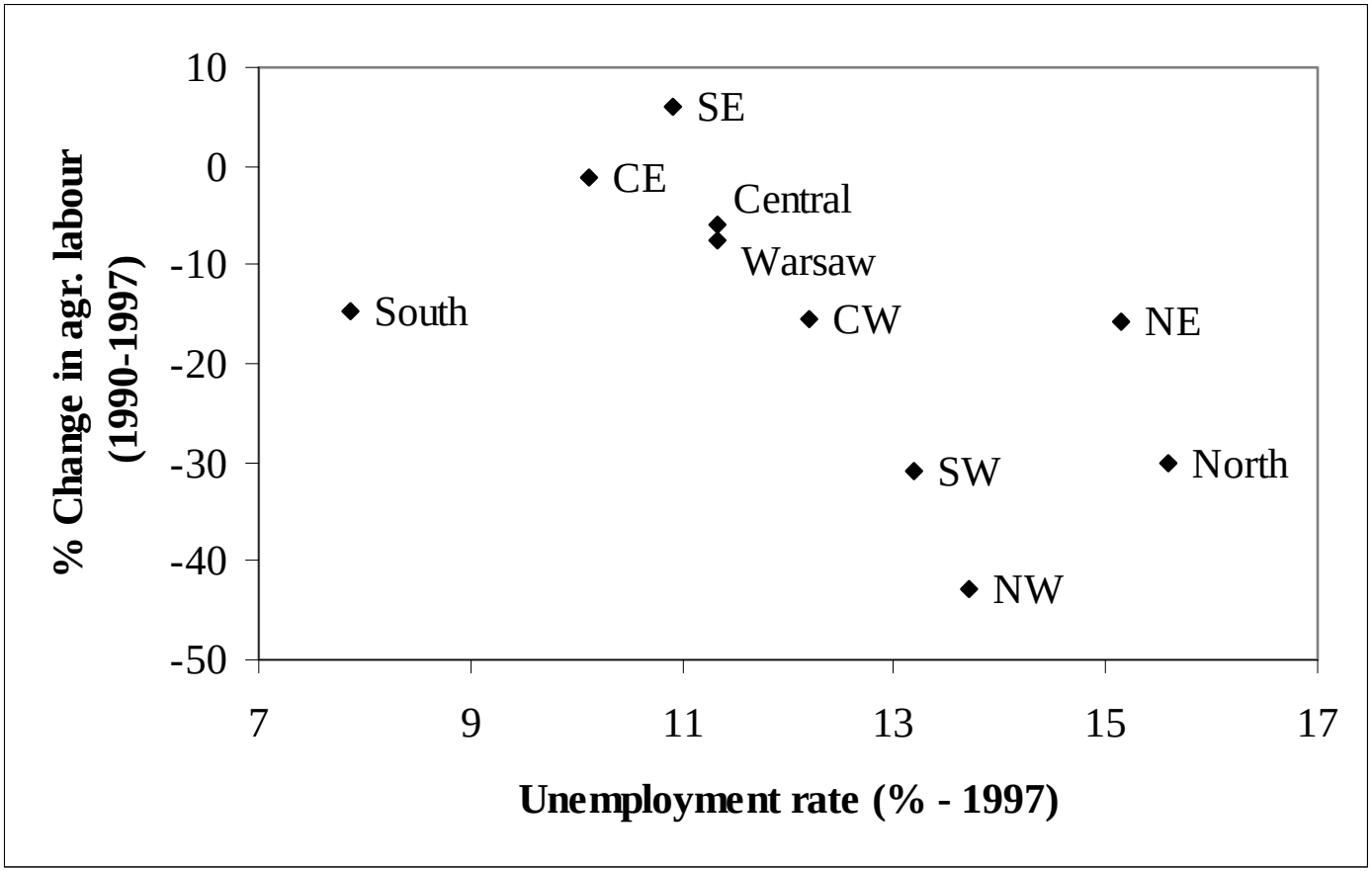
Slovakia : similar, more unemployed

Poland: “Push factor”: unemployment

Ag labor adjustment and regional unemployment in Poland



International Aspects of Transition

- Trade
- Migration
- Capital flows
- Foreign direct investment
- International agreements
  - WTO
  - EU enlargement

Trade liberalization reinforced domestic reform effects

- Terms of trade effect
- Food prices increased, but quality improved
  - Directly through imports
  - Indirectly through competition effects
- International reallocation of production
  - Intensification of EU-CEEC trade
  - Reduction of specialisation
    - Dairy in Baltics
    - Cotton in Central Asia

Migration

- Very important in some transition countries and regions
  - Central Europe -> EU
  - East Europe -> Central Europe
- Most extreme case is Albania

Agri-food FDI, Vertical Integration & Chain Restructuring

- Injection of capital, technology, ... in chain
- Innovative contracting and vertical integration
- Positive spill-over effects at the farm level
- To assure guaranteed quality and quantity : Assisting farms in access to finance and inputs is crucial with market imperfections (finance & input support programs, leasing, ...)

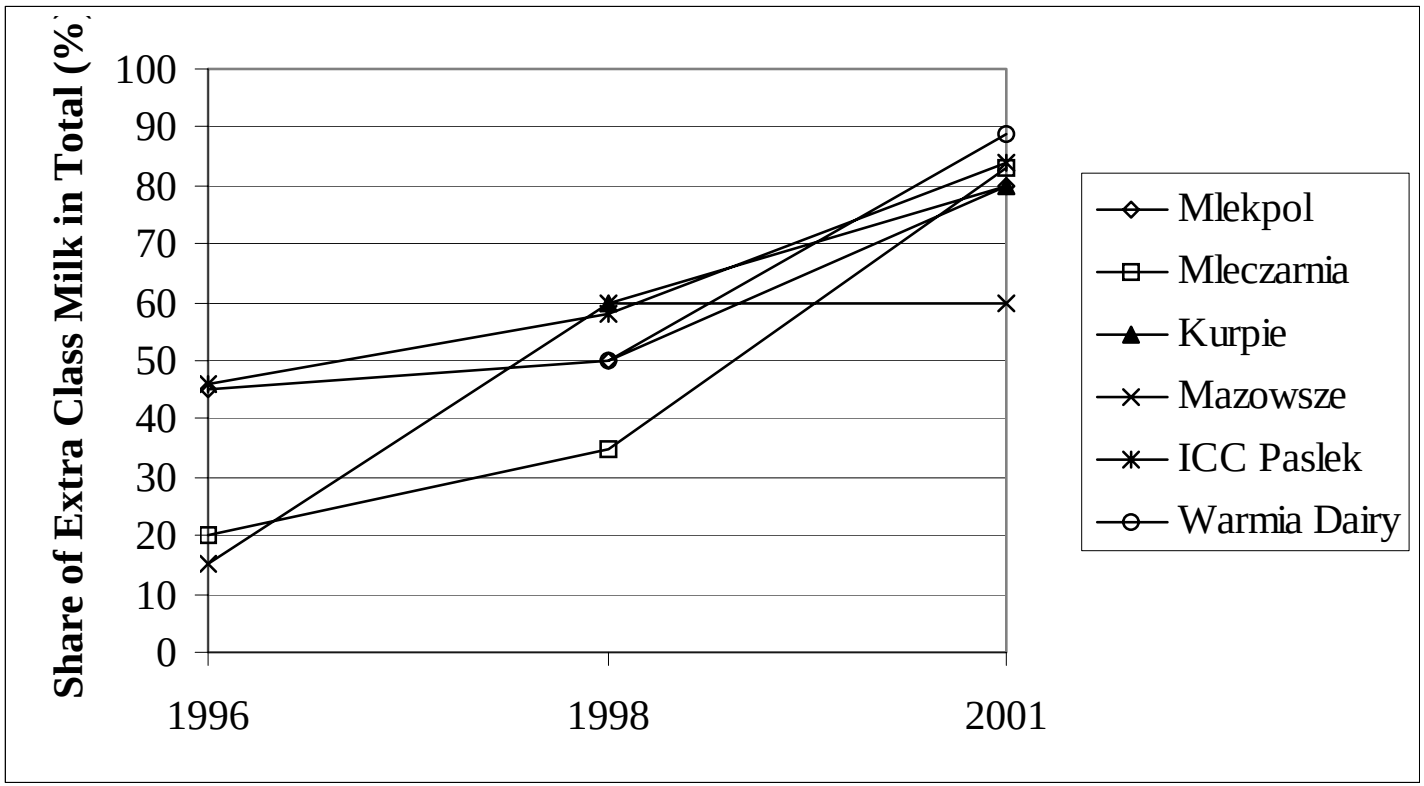
Farm assistance by agribusiness companies – examples :

- Input supply programs
- Investment assistance program
- Trade credit
- Bank loan guarantee programs
- Extension services
- .....

Effects: Investments and Loans of Small Dairy Farms in North Poland 2001

# cows per farm	Invests (% of total) *A*	Uses loan to invest (% of A) *B*	Uses dairy loan (% of B) *C*	Uses bank loan (% of B) *D*
1-5	52	54	41	50
6-10	78	51	43	70
>10	92	74	43	75
ALL	**76**	**58**	**43**	**69**

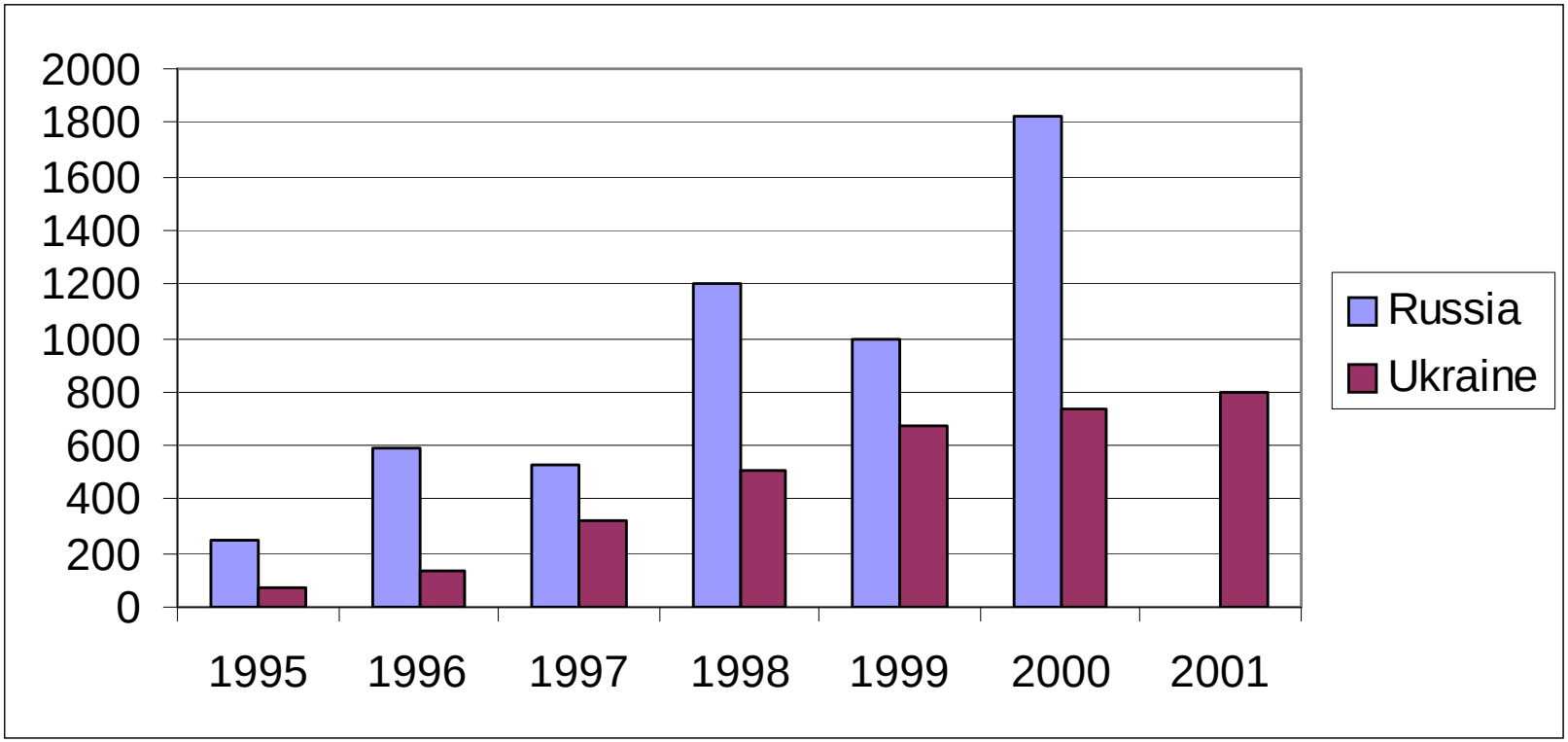
Effects: Milk Quality 1996 - 2001 (share of EU extra class, NE Polish dairy)



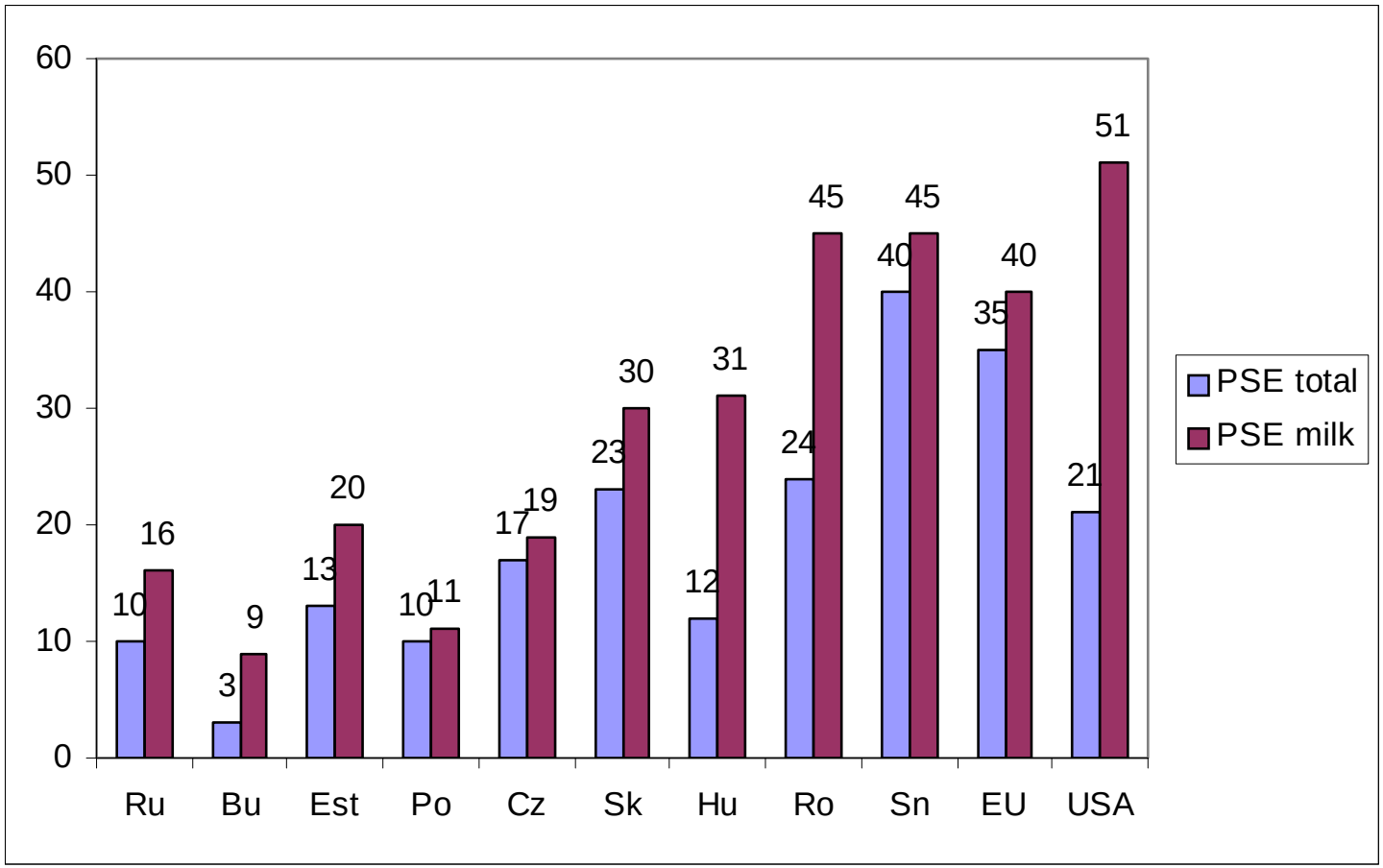
FDI, growth & international competitiveness

- Important in succesfull transition countries
- Crucial role in Central European agri-food recovery and growth
- after 1998 vertical integration in Russian food chain, driven by foreign and domestic investments from outside agri-food system
- similar developments in other CIS (eg grain traders in Kazakstan who invest upstream)

Evolution of FDI in the Agri-food Sector, Ru & Uk



Agricultural support in 2001 (%PSE total and milk)



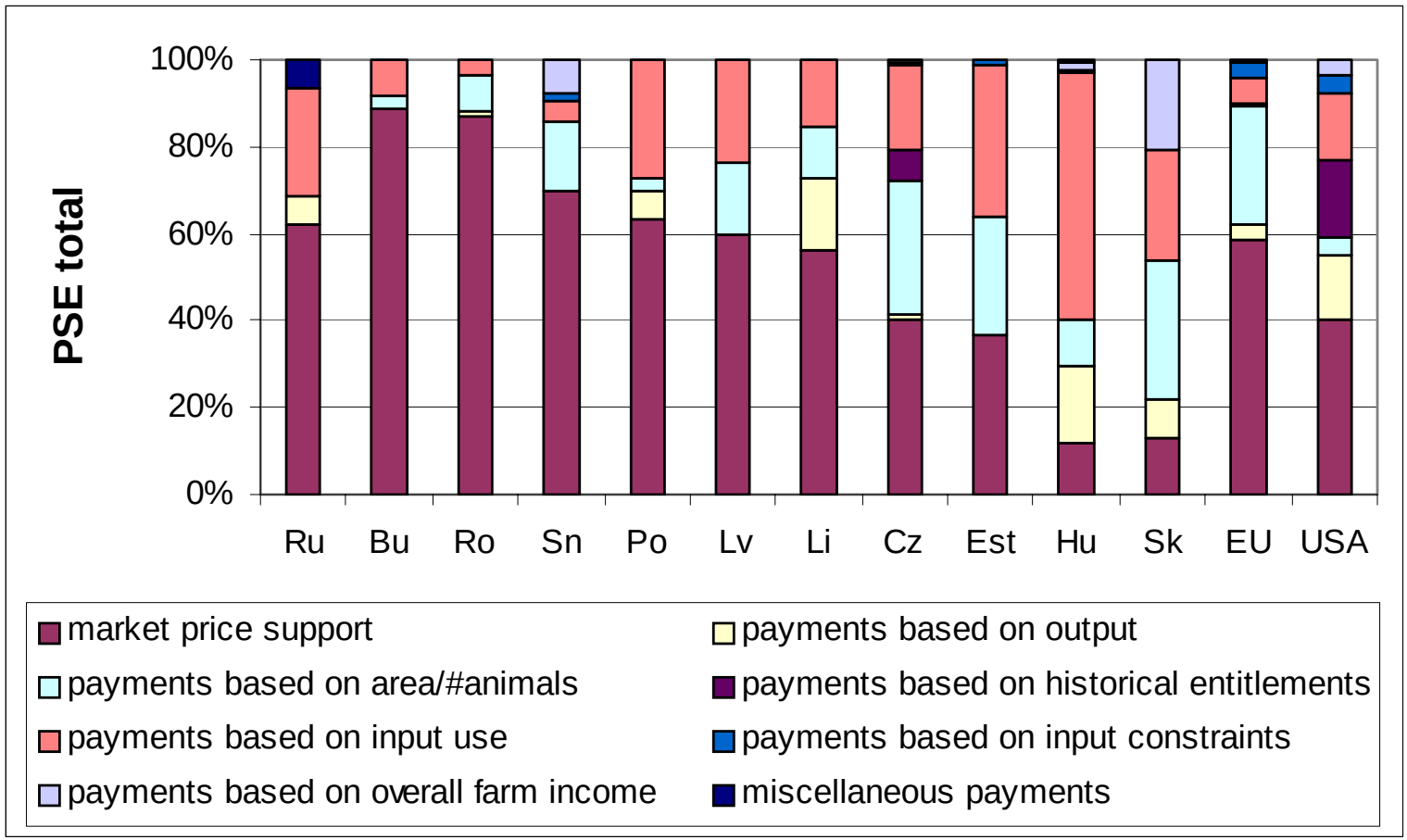
Subsidies and farm support

- On average lower than in OECD, but large variation between and within countries

Eg. Russia PSEs:

- Average 10%
- Dairy 16%
- Beef and poultry > 50%
- Grains < 0

Components of agr. support in 2001 (share of total PSE)



Instruments of farm support

Market support (% of total PSE):

- > 60% in Russia, Bulgaria, Romania, Slovenia, Poland
- < 10% in Hungary and Slovakia